

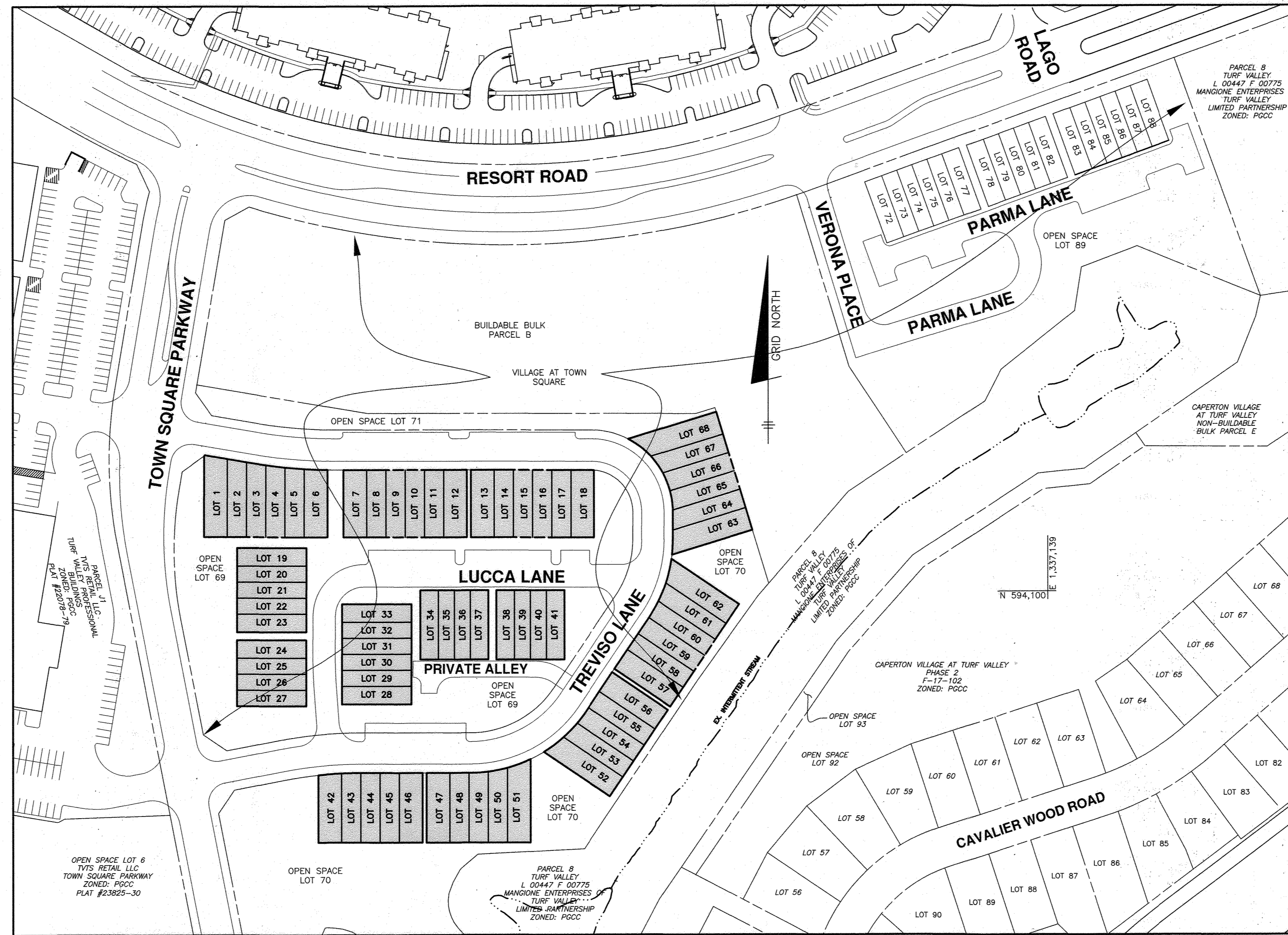
GENERAL NOTES

- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS ALTERNATIVE COMPLIANCES HAVE BEEN APPROVED AND NOTED BELOW.
- THE SUBJECT PROPERTY IS ZONED PGCC-2 PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THIS PROJECT IS SUBJECT TO THE 3RD AMENDED TURF VALLEY MULTI-USE SUB-DISTRICT FINAL DEVELOPMENT PLAN RECORDED AS PLAT NUMBERS 21029-21031 ON MARCH 26, 2010 AND THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 1661 AND 0012 WERE USED FOR THIS PROJECT.
- TRACT BOUNDARY IS BASED ON A FIELD SURVEY PERFORMED BY JOHN B. MILDENBERG IN MARCH, 2006.
- THE EXISTING TOPOGRAPHY SHOWN IS BASED ON THE F-20-071 ROAD CONSTRUCTION PLANS.
- THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN TAKEN FROM THE F-20-071 ROAD CONSTRUCTION PLANS AND CONTRACT NO. 24-5089-D.
- THERE ARE NO WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, 100 YEAR-FLOODPLAINS, OR STEEP SLOPES 25% OR GREATER THAT ARE MORE THAN 20,000 SF OF CONTIGUOUS AREA LOCATED ON THESE LOTS.
- THE WETLAND LIMITS FOR TURF VALLEY ARE BASED ON A STUDY CONDUCTED BY EXPLORATION RESEARCH, INC. AND VERIFIED BY ECO-SCIENCE PROFESSIONALS, INC. ON MAY 26, 2016. THE LIMITS SHOWN ARE IN ACCORDANCE WITH THOSE SHOWN ON THE 4TH AMENDMENT TO THE TURF VALLEY COMPREHENSIVE SKETCH PLAN (S-86-13, PB 368) APPROVED JULY 28, 2006.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERIES, BURIAL GROUNDS OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
- A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT AS NONE OF THE PROPOSED LOTS ARE WITHIN 500 FEET OF THE INTERSTATE 70 OR ROUTE 40 RIGHTS-OF-WAY.
- THE TRAFFIC STUDY WAS PREPARED BY TRAFFIC GROUP ON JANUARY 7, 2005 AND APPROVED UNDER THE 4TH AMENDED COMPREHENSIVE SKETCH PLAN ON APRIL 27, 2006. THE INFORMATION WAS UPDATED WITH CONFIRMATION LETTER DATED DECEMBER 30, 2020 AND FURTHER AMENDED BY REVISION LETTER DATED APRIL 5, 2021 AND APPROVED UNDER F-20-071.
- THIS SITE IS WITHIN THE METROPOLITAN DISTRICT.
- WATER & SEWER IS PUBLIC. THE CONTRACT NO. IS 24-5089-D. THE DRAINAGE AREA IS THE LITTLE PATUXENT. THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWER SERVICE HAS BEEN GRANTED UNDER THESE TERMS AND PROVISIONS, THEREOF, EFFECTIVE 9-23-2021, ON WHICH DATE DEVELOPER AGREEMENT NUMBER F-20-071/24-2089-D WAS FILED AND ACCEPTED.
- THIS PROJECT IS EXEMPT FROM THE HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202(b)(1)(iv) OF THE HOWARD COUNTY CODE SINCE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND AS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
- LANDSCAPING IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL VIA A CERTIFIED LANDSCAPE PLAN AS PART OF THIS PLAN SET. FINANCIAL SECURITY IN THE AMOUNT OF \$31,530.00 FOR THE REQUIRED 25 SHADE TREES AND PROVISIONS, THEREOF, EFFECTIVE 9-23-2021, ON WHICH DATE DEVELOPER AGREEMENT NUMBER F-20-071/24-2089-D WAS FILED AND ACCEPTED.
- RESIDENTIAL LANDSCAPE OBLIGATIONS SHALL BE POSTED AS PART OF THE GRADING PERMIT.
- STORMWATER MANAGEMENT FOR THESE LOTS WAS PROVIDED UNDER F-20-071. THERE ARE NO ON-LOT ESD SWM PRACTICES.
- THIS PROJECT IS EXEMPT FROM THE MODERATE INCOME HOUSING UNIT REQUIREMENT (COUNCIL BILL 35-2013) SINCE IT IS ZONED PGCC.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 - SURFACE - 6" OF CRUSHER RUN BASE WITH TAR AND CHIP COATING (1.5" MIN).
 - GEOMETRY - MAX 15% GRADE, MAX 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
 - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD).
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- FOR APPLICABLE PREVIOUS HOWARD COUNTY FILE REFERENCES SEE SITE ANALYSIS DATA CHART ON THIS SHEET.
- PUBLIC TRASH PICKUP SHALL BE PROVIDED FOR ALL LOTS. LOTS 34-41 IN THE PRIVATE ALLEY FRONT ON LUCCA LANE. TRASH PICKUP SHALL BE PROVIDED AT LUCCA LANE THROUGH AN AGREEMENT WITH THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENVIRONMENTAL SERVICES. PICKUP WILL OCCUR ONCE ALL CONSTRUCTION HAS BEEN COMPLETED. A DAMAGE WAIVER HAS BEEN ATTACHED TO THE HOA AGREEMENT FOR THE PUBLIC TRASH SERVICE.
- IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, WINDOW WELLS, ORIELS, VESTIBLES, BALCONIES AND CHIMNEYS MAY ENCHORE 4 FEET INTO ANY SETBACK OR REQUIRED DISTANCE BETWEEN BUILDINGS PROVIDED THE FEATURE HAS A MAXIMUM WIDTH OF 16 FEET. EXTERIOR STAIRWAYS OR RAMPS, ABOVE OR BELOW GROUND LEVEL (EXCLUDING THOSE ATTACHED TO A PORCH OR DECK) MAY ENCHORE 10 FEET INTO A FRONT SETBACK OR A SETBACK FROM A PROJECT BOUNDARY, 16 FEET INTO A REAR SETBACK, 4 FEET INTO A SIDE SETBACK OR REQUIRED DISTANCE BETWEEN BUILDINGS. OPEN OR ENCLOSED PORCHES OR DECKS AND THE STAIRWAYS OR RAMPS ATTACHED THERETO MAY ENCHORE 10 FEET INTO A FRONT OR REAR SETBACK, SETBACK FROM A PROJECT BOUNDARY OR A REQUIRED DISTANCE BETWEEN BUILDINGS.
- REFER TO HO. CO. STD. DETAILS R-6.03 AND R-6.05 FOR DRIVEWAY APRONS.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SEWER HOUSE CONNECTION (SHO) INVERTS SHOWN ARE LOCATED AT THE PROPERTY (OR EASEMENT) LINE.
- THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE PARKING LOTS AND ON-STREET PARKING, INCLUDING PAVEMENT, STRIPING, CURB, LITTER PICKUP, SIDEWALK, AND SNOW REMOVAL.
- THE SETBACKS ON THIS SITE DEVELOPMENT PLAN FOR LOTS 1-18, 28-33, 34-68 WERE APPROVED BY THE PLANNING BOARD ON APRIL 7, 2022. THE APPROVAL ALLOWED FOR THE REDUCTION OF THE RESIDENTIAL REAR SETBACK FROM 20 FEET DOWN TO 15.7 FEET ON LOTS 1-18 AND 42-68, FROM 20 FEET DOWN TO 19.7' ON LOTS 28-33, AND FROM 20 FEET DOWN TO 16.5' ON LOTS 34-41.
- THE PARKING SPACES ALONG THE PUBLIC ROAD (TREVISO LANE) SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION. HOWARD COUNTY WILL NOT PROVIDE SNOW REMOVAL.

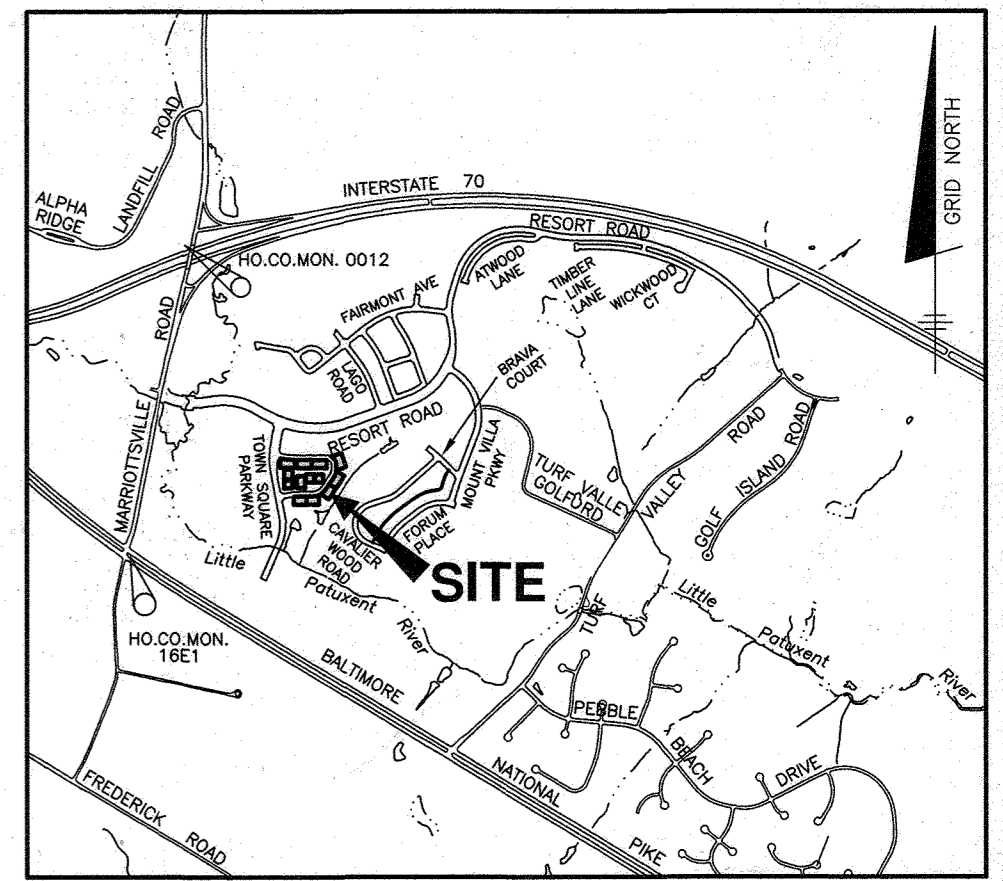
RESIDENTIAL SITE DEVELOPMENT PLAN

VILLAGES AT TOWN SQUARE

PHASE 1 - LOTS 1 thru 68



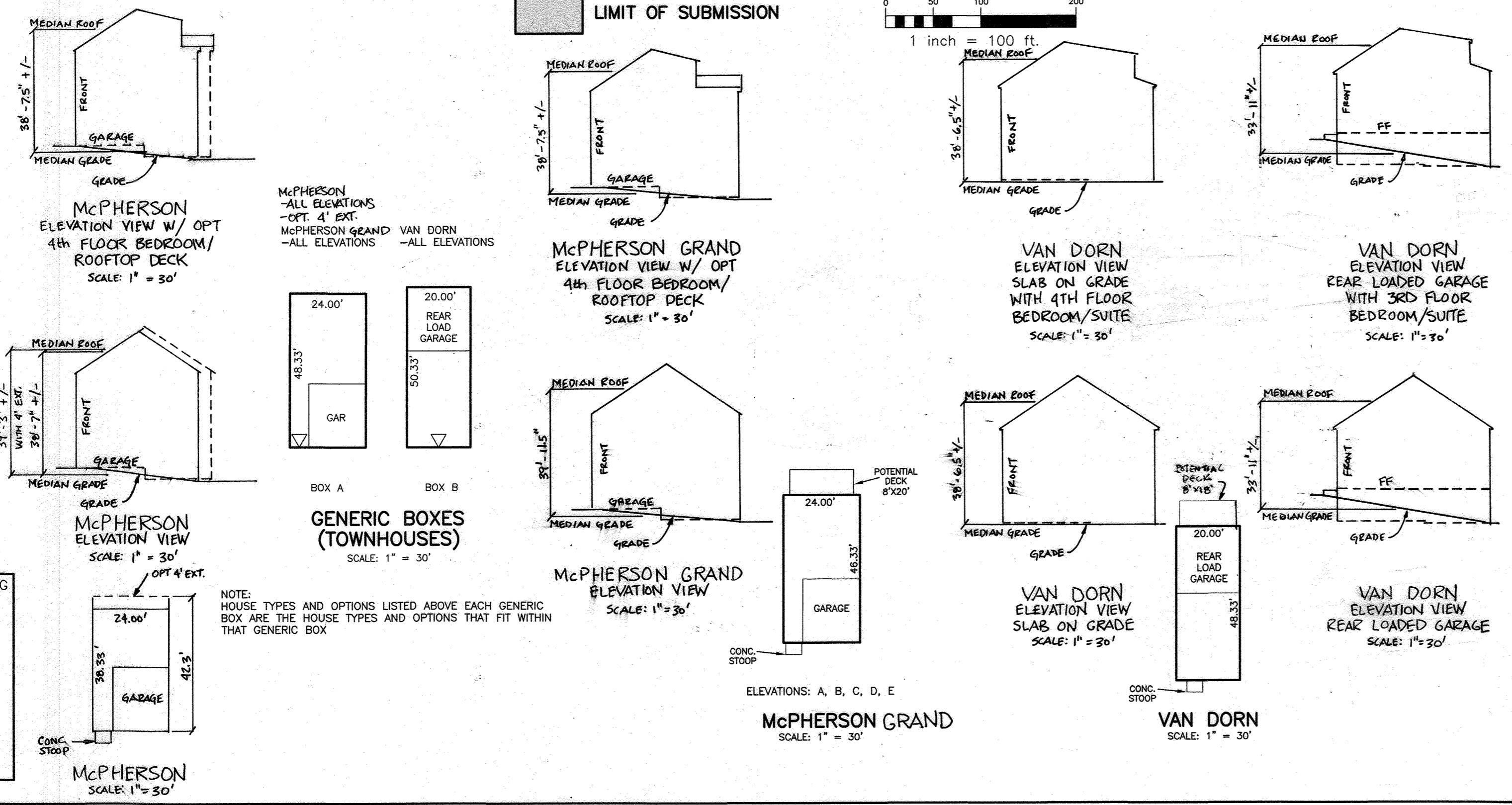
Lot	Address
1	3940 TEMPO LANE
2	3942 "
3	3944 "
4	3946 "
5	3948 "
6	3950 "
7	3952 "
8	3954 "
9	3956 "
10	3958 "
11	3960 "
12	3962 "
13	3964 "
14	3966 "
15	3968 "
16	3970 "
17	3972 "
18	3974 "
19	3976 "
20	3978 "
21	3980 "
22	3982 "
23	3984 "
24	3986 "
25	3988 "
26	3990 "
27	3992 "
28	3994 "
29	3996 "
30	3998 "
31	3942 "
32	3944 "
33	3946 "
34	3948 "
35	3950 "
36	3952 "
37	3954 "
38	3956 "
39	3958 "
40	3960 "
41	3962 "
42	3964 "
43	3966 "
44	3968 "
45	3970 "
46	3972 "
47	3974 "
48	3976 "
49	3978 "
50	3980 "
51	3982 "
52	3984 "
53	3986 "
54	3988 "
55	3990 "
56	3992 "
57	3994 "
58	3996 "
59	3998 "
60	3942 "
61	3944 "
62	3946 "
63	3948 "
64	3950 "
65	3952 "
66	3954 "
67	3956 "
68	3958 "



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP: 19
GRID: D4

SHEET INDEX	
SHEET	TITLE
1	SITE DEVELOPMENT PLAN COVER SHEET
2	SITE DEVELOPMENT AND GRADING PLAN
3	LANDSCAPE PLAN
4	SEDIMENT & EROSION CONTROL PLAN
5	SEDIMENT & EROSION CONTROL NOTES
6	SEDIMENT & EROSION CONTROL DETAILS
7-9	RETAINING WALL PLANS

SITE ANALYSIS DATA CHART	
A)	TOTAL PROJECT AREA (AS SHOWN ON F-20-071) 9.16 ACRES
B)	AREA OF PLAN SUBMISSION (BUILDABLE LOTS ONLY) 3.34 ACRES
C)	LIMIT OF DISTURBED AREA 4.4 ACRES
D)	PRESENT ZONING: PGCC-2
E)	PROPOSED USE OF SITE: RESIDENTIAL - SINGLE FAMILY ATTACHED
F)	FLOOR SPACE ON EACH LEVEL OF BLDG PER USE: N/A
G)	TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S) 68
H)	TOTAL NUMBER OF UNITS PROPOSED 68
I)	MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE: N/A
J)	NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGS AND/OR FDP CRITERIA 68 SFA x 2.5 = 170 SPACES
K)	NUMBER OF PARKING SPACES PROVIDED ONSITE (INCLUDES HANDICAPPED SPACES) 190 (PROVIDED UNDER F-21-070)
L)	OPEN SPACE ON-SITE: N/A
M)	AREA OF RECREATIONAL OPEN SPACE REQUIRED: N/A AREA OF RECREATIONAL OPEN SPACE PROVIDED: N/A
N)	BUILDING COVERAGE OF SITE 1,000 sf } BASED ON THE LOT WITH LARGEST COVERAGE PERCENTAGE PERCENTAGE OF GROSS AREA 57.8% (I.E. LOT 20) (MAXIMUM ALLOWED 60%)
O)	APPLICABLE DPZ FILE REFERENCES: S-86-013, ECP-17-047, S-17-008, WP-18-002, F-12-055, F-15-056, P-18-004, F-20-072, WP-21-051



BULK REGULATIONS:
(per 3RD AMENDMENT TO THE TURF VALLEY, MULTI-USE SUBDISTRICT FDP)

PERMITTED USES: ALL USES AS PER TURF VALLEY PGCC DISTRICT, MULTI-USE SUBDISTRICT FINAL DEVELOPMENT PLAN, THIRD AMENDMENT, PLATS 21029-21033 (48 USES OUTLINED FROM RESIDENTIAL USES TO SPECIALTY STORES)

PROPOSED USE: SINGLE FAMILY ATTACHED

PERMITTED HEIGHT: PRINCIPAL STRUCTURE: 34 FEET
EXCEPT UNITS WITH GABLE, HIP, OR GAMBREL ROOFS: 40 FEET

MAXIMUM LOT COVERAGE FOR STRUCTURES WITHIN SINGLE-FAMILY ATTACHED PROJECTS DEVELOPED WITH ONE DWELLING UNIT PER LOT: 80 PERCENT

MAXIMUM DENSITY FOR TOTAL PGCC DISTRICT IS 2.0 DWELLING UNITS PER ACRE.

MAXIMUM UNITS PER STRUCTURE: SINGLE FAMILY ATTACHED: 8 UNITS

MAXIMUM BUILDING LENGTH FOR RESIDENTIAL STRUCTURE: 120 FEET
(PLANNING BOARD MAY APPROVE GREATER LENGTH UP TO 300 FEET)

MINIMUM SETBACK REQUIREMENTS:

FROM ARTERIAL ROADS:
RESIDENTIAL STRUCTURES: 50 FEET
ACCESSORY USES: 30 FEET

FROM COLLECTORS AND LOCAL STREETS:
RESIDENTIAL STRUCTURES: 30 FEET FROM A 60 FT. ROW
20 FEET FROM A 50 FT. ROW
ACCESSORY USES: 10 FEET

FROM NON-PGCC ADJACENT PROPERTIES:
FROM RESIDENTIAL DISTRICTS: 75 FEET
FROM ALL OTHER DISTRICTS: 30 FEET

FROM LOT LINES WITHIN PGCC MULTI-USE SUBDISTRICT:
SINGLE FAMILY DETACHED: 7.5 FEET
ZERO LOT LINE AND ALL OTHER SIZES: 0 FEET
A MINIMUM OF 10 FEET MUST BE PROVIDED BETWEEN STRUCTURES:
RESIDENTIAL: REAR 20 FEET

MINIMUM DISTANCE BETWEEN ATTACHED DWELLING UNITS:
FACE TO FACE: 30 FEET
FACE TO SIDE/REAR: 30 FEET
SIDE TO SIDE: 15 FEET
REAR TO REAR: 60 FEET
REAR TO FACE: 100 FEET

PERMIT INFORMATION CHART					
SUBDIVISION NAME:		SECTION/AREA:	LOT/PARCEL #		
VILLAGE AT TOWN SQUARE		PHASE 1	LOTS 1-68		
PLAT No.	GRID No.	ZONE	TAX MAP No.	ELECTION DISTRICT	CENSUS TRACT
26006-26010	19	PgCC-2	16	3	6030.00

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE: APRIL 7, 2022

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: 10/17/22
Chief, Division of Land Development: 10/24/22
Director: 10/24/22

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the authority of the State of Maryland. License No. 22550, expires 6-30-2023.

BENCHMARK ENGINEERING, INC.
3300 N. RIDGE ROAD & SUITE 140 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

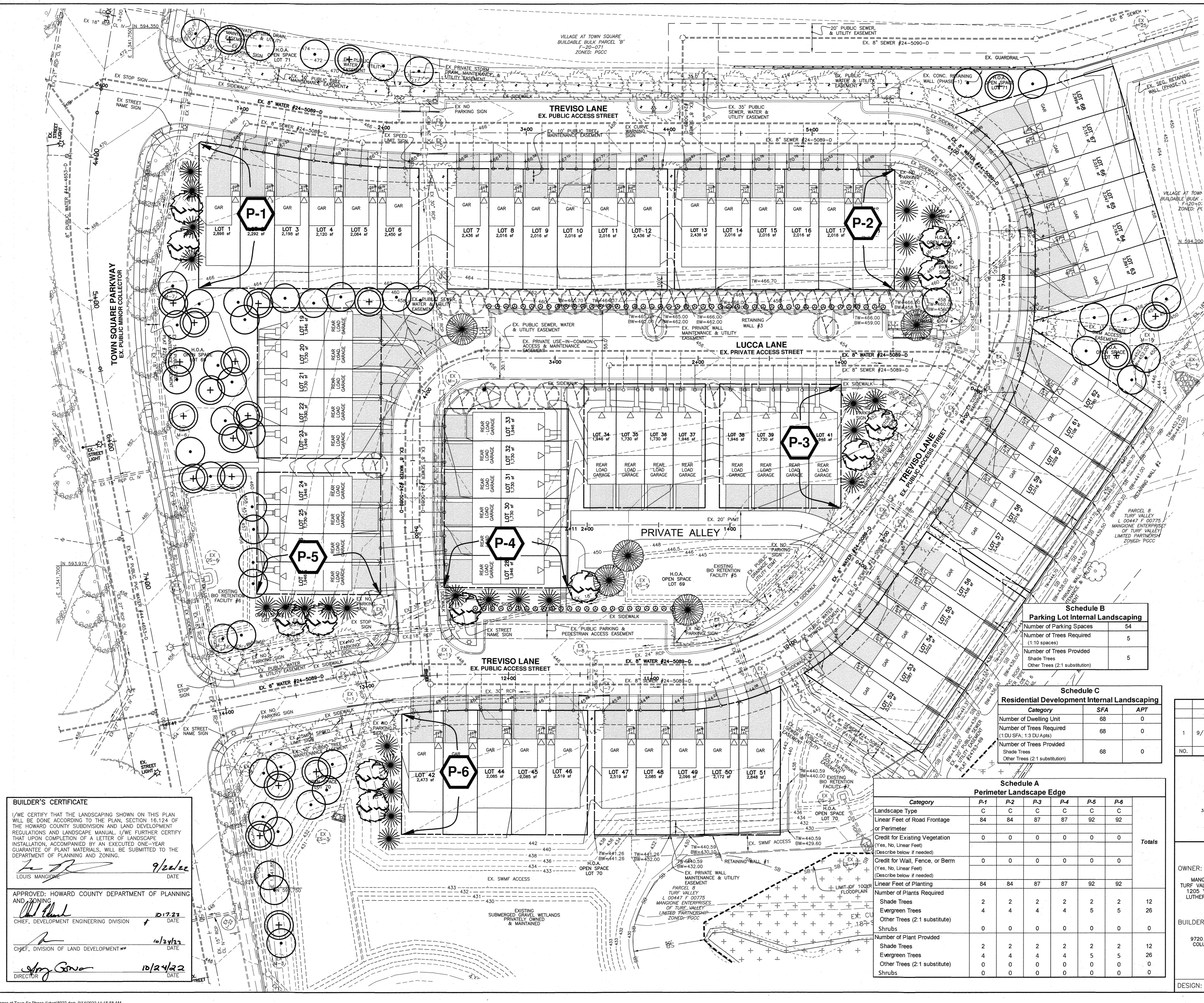
VILLAGES AT TOWN SQUARE
Phase 1
Lots 1 thru 68
(previously recorded as Plat No. 26006-26010)

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
410-825-8400

TAX MAP: 16 - GRID: 19 - PARCEL: 8
ZONED: PGCC-2
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT PLAN COVER SHEET

DATE: SEPTEMBER 15, 2022
BEI PROJECT NO. 3097
DESIGN: DBT
DRAFT: DBT
SCALE: AS SHOWN
SHEET 1 OF 9



LANDSCAPE PLANTING LIST				
SYMBOL	QUANTITY	NAME	REMARKS	DESCRIPTION
	26	CUPPRESSOCYPRIS LEYLANDI (Leyland Cypress)	5' - 6' ht.	PERIMETER EVERGREEN TREES TO BE PROVIDED BY THE BUILDER
	12	CLADRASIS KENTUCKEA LUTEA (Yellowwood)	2.5" - 3" cal.	PERIMETER SHADE TREES TO BE PROVIDED BY THE BUILDER
	47	ACER RUBRUM 'RED SUNSET' (Red Sunset Red Maple)	2.5" - 3" cal.	SHADE TREES TO BE SATISFY RESIDENTIAL INTERNAL OBLIGATION TO BE PROVIDED BY THE BUILDER
	21	QUERCUS PALUSTRIS (Pin Oak)	2.5" - 3" cal.	SHADE TREES TO BE SATISFY RESIDENTIAL INTERNAL OBLIGATION TO BE PROVIDED BY THE BUILDER
	5	PRUNUS SARGENTII (Sargent Cherry)	2.5" - 3" cal.	SHADE TREES TO BE SATISFY INTERNAL PARKING OBLIGATION TO BE PROVIDED BY THE BUILDER
	71	DENSIFORMIS YEW (Anglo-Japanese Yew)	24"-30" B&B SPACE 6' APART	EVERGREEN SHRUBS TO BE PLANTED ALONG PARKING SPACES TO BE PROVIDED BY THE BUILDER
				EXISTING STREET TREES PLANTED UNDER F-20-071
				EXISTING STREET TREES PLANTED UNDER SDF-10-027

- LANDSCAPE NOTES:**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.
 - STREET TREE LOCATIONS:**
 - WHEN THE DISTANCE BETWEEN THE CURB AND SIDEWALK IS 6 FEET OR GREATER, THE TREES SHALL BE LOCATED WITHIN THE RIGHT-OF-WAY AND SHALL BE CENTERED BETWEEN THE CURB AND SIDEWALK.
 - WHEN THE DISTANCE BETWEEN THE CURB AND SIDEWALK IS LESS THAN 6 FEET, TREES MAY BE PLANTED 3 FEET FROM THE SIDEWALK IN THE DIRECTION AWAY FROM THE ROAD. A 10-FOOT WIDE TREE MAINTENANCE EASEMENT SHALL BE REQUIRED IF THE RIGHT-OF-WAY IS LIMITED.
 - TREES SHALL BE PLANTED 6 FEET BEHIND CURB WHEN THERE ARE NO SIDEWALKS.
 - TREES TO BE PLANTED MINIMUM 30 FEET FROM SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB. TREES MAY NOT BE PLANTED WITHIN 5 FEET OF A STORM DRAIN INLET, OPEN SPACE ACCESS STRIP, OR 10 FEET OF A DRIVEWAY.
 - AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWIT LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.
 - THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 - B&B ZONES: TREE HEIGHTS AT MATURITY SHALL BE LIMITED TO 25 FEET MAXIMUM WITHIN THE "GREEN ZONE"; TREE HEIGHTS AT MATURITY SHALL BE LIMITED TO 40 FEET MAXIMUM WITHIN THE "YELLOW ZONE". IF TREES ARE TO BE PLANTED ON BERMS THE TREE HEIGHTS SHALL BE REDUCED BY THE HEIGHT OF THE BERM AS MEASURED ABOVE THE MEAN GROUND ELEVATION OF THE UTILITY POLE LINE.
 - ON THE APPROACH SIDE OF A STOP SIGN, NO STREET TREE CAN BE PLANTED WITHIN 30 FEET OF THE STOP SIGN. A MINIMUM OF 20 FEET SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
 - FINANCIAL SURETY IN THE AMOUNT OF \$31,530.00 FOR THE REQUIRED 85 SHADE TREES, 26 EVERGREEN TREES, AND 71 SHRUBS SHALL BE POSTED AS PART OF THE GRADING PERMIT.

Schedule B
Parking Lot Internal Landscaping

Number of Parking Spaces	54
Number of Trees Required (1-10 spaces)	5
Number of Trees Provided (Shade Trees / Other Trees (2:1 substitution))	5

Schedule C
Residential Development Internal Landscaping

Category	SFA	APT
Number of Dwelling Unit	68	0
Number of Trees Required (1 DU SFA: 1.3 DU Apts)	68	0
Number of Trees Provided (Shade Trees / Other Trees (2:1 substitution))	68	0

Schedule A
Perimeter Landscape Edge

Category	P-1	P-2	P-3	P-4	P-5	P-6	Totals
Landscape Type	C	C	C	C	C	C	
Linear Feet of Road Frontage or Perimeter	84	84	87	87	92	92	
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	0	0	0	0	0	0	
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet) (Describe below if needed)	0	0	0	0	0	0	
Linear Feet of Planting	84	84	87	87	92	92	
Number of Plants Required							
Shade Trees	2	2	2	2	2	2	12
Evergreen Trees	4	4	4	4	5	5	26
Other Trees (2:1 substitute)							
Shrubs	0	0	0	0	0	0	0
Number of Plant Provided							
Shade Trees	2	2	2	2	2	2	12
Evergreen Trees	4	4	4	4	5	5	26
Other Trees (2:1 substitute)	0	0	0	0	0	0	0
Shrubs	0	0	0	0	0	0	0

BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 9/26/22 DATE
LOUIS MANGIONE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/2/22 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/24/22 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/24/22 DATE
DIRECTOR

NO.	DATE	REVISION
1	9/15/2022	REVISE RETAINING WALL HEIGHTS. ADD RET WALL #3. REVISE LOTS 10-18 AND 47-62 TO ELIMINATE WALKOUT CONDITION. SHIFT TOTAL SHEET NUMBERS ON LOTS 44-51 UP TO 20' BRL. REVISE WHO METER LOCATIONS AND SHC CLEANOUT FOR LOTS 19-33 PER REDLINED WATER/SEWER PLAN. REVISE TIE-IN BOX NUMBER IN TITLE BLOCK.

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
3300 N. RIDGE ROAD SUITE 140 A BELTFOUR CITY, MARYLAND 21043
(P) 410-465-6100 (F) 410-465-6964
WWW.BE-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer registered in the State of Maryland, License No. 191620, dated 06/20/2019.

VILLAGES AT TOWN SQUARE
Phase 1
Lots 1 thru 68
(previously recorded as Plat No. 26006-26010)

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
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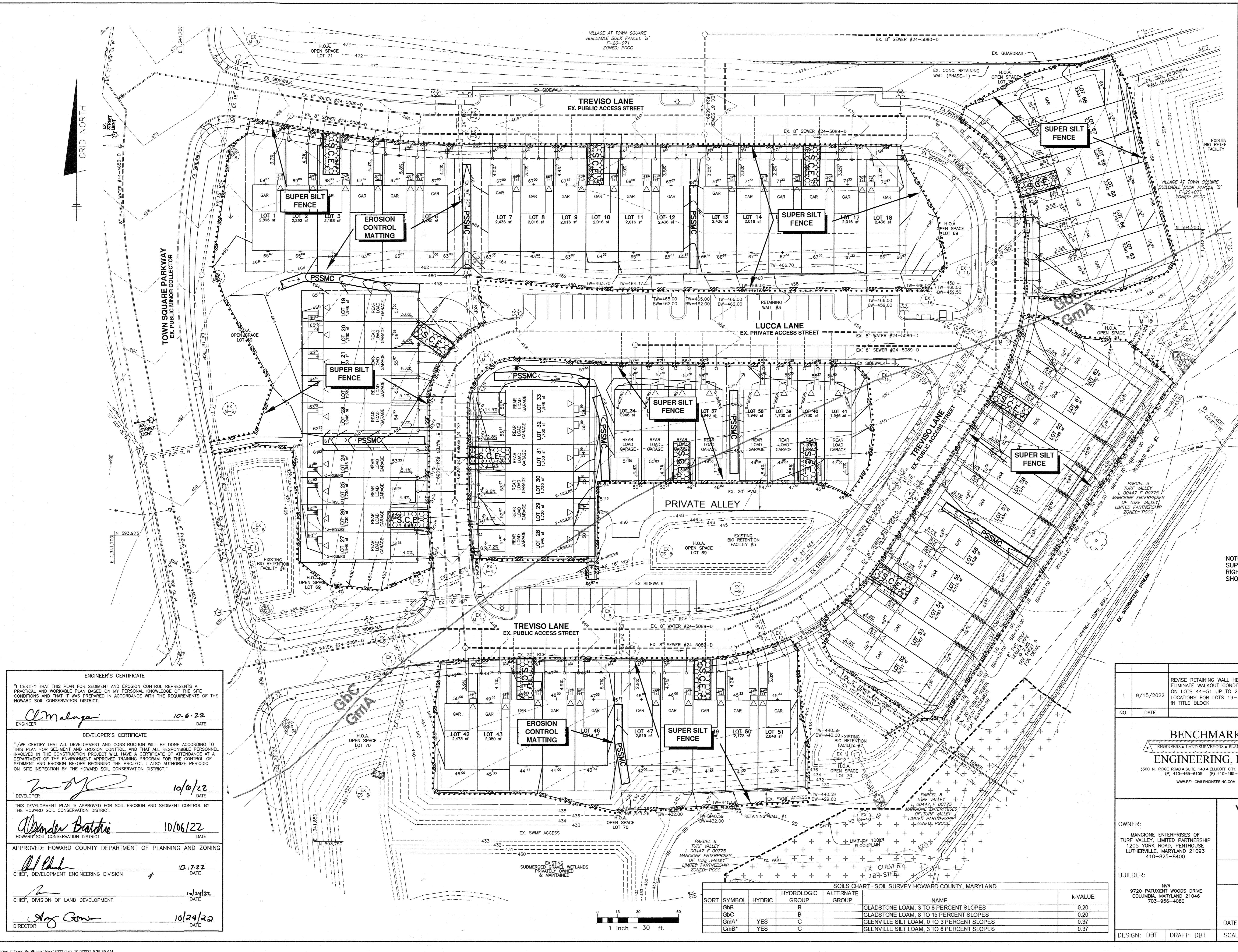
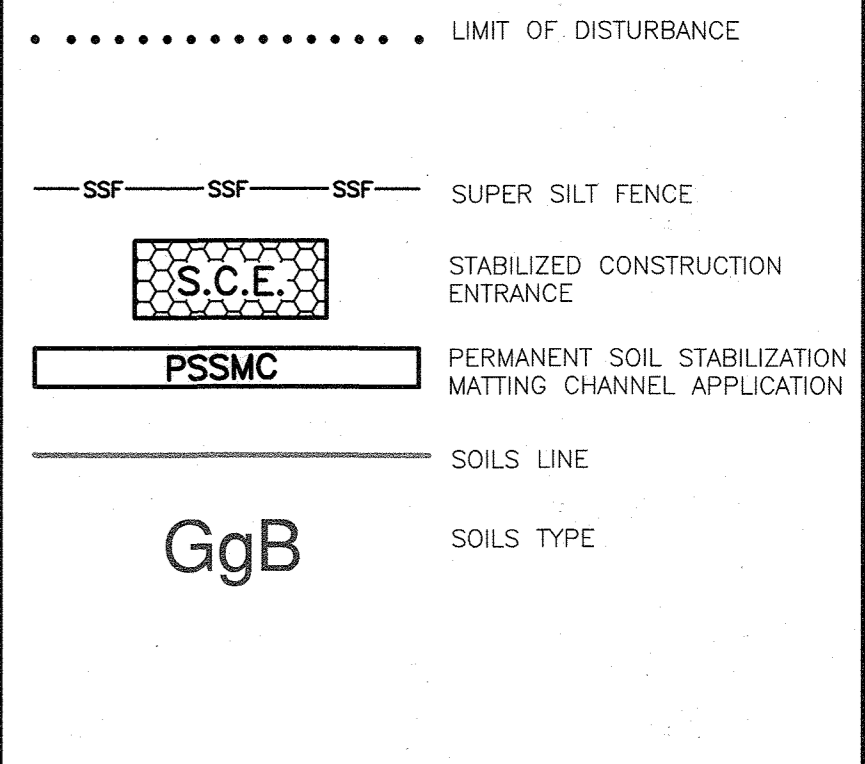
BUILDER: NVR
9720 PATUMENT WOODS DRIVE COLUMBIA, MARYLAND 21046
703-956-4080

TAX MAP: 16 - GRID: 19 - PARCEL: 8
ZONED: PGCC-2
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

LANDSCAPE PLAN

DATE: SEPTEMBER 15, 2022 BEI PROJECT NO. 3097
DESIGN: DBT DRAFT: DBT SCALE: AS SHOWN SHEET 3 OF 9
SDP-22-034

SEDIMENT CONTROL LEGEND



NOTE: SUPER SILT FENCE TO BE UTILIZED ALONG PUBLIC RIGHT-OF-WAY AND AT BOTTOM OF ALL SWALES AS SHOWN ON THIS PLAN.

THIS PLAN IS FOR SEDIMENT AND EROSION CONTROL ONLY.

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Cl Malaga 10-6-22
 ENGINEER DATE

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 10/6/22
 DEVELOPER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Alexander Bantchev 10/06/22
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/22/22
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/24/22
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/24/22
 DIRECTOR DATE

NO.	DATE	REVISION
1	9/15/2022	REVISE RETAINING WALL HEIGHTS. ADD RET WALL #3. REVISE LOTS 10-18 AND 47-62 TO ELIMINATE WALKOUT CONDITION. REVISE REAR LOT GRADING ACCORDINGLY. SHIFT GENERIC BOXES ON LOTS 44-51 UP TO 20" BRL. REVISE THE WHC METER LOCATIONS AND SHC GLEANOUT LOCATIONS FOR LOTS 19-33 PER REDUCED WATER/SEWER PLAN. REVISE TOTAL SHEET NUMBER IN TITLE BLOCK

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 3300 N. RIDGE ROAD SUITE 140 & ELLICOTT CITY, MARYLAND 21045
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 WWW.BEI-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 23390, dated 09/26/2017, expires 09/30/2023.

VILLAGES AT TOWN SQUARE
 Phase 1
 Lots 1 thru 68
 (previously recorded as Plat No. 26006-26010)

OWNER:
 MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
 410-825-8400

BUILDER:
 NVR
 9720 PATENT WOODS DRIVE
 COLUMBIA, MARYLAND 21046
 703-956-4080

TAX MAP: 16 - GRID: 19 - PARCEL: 8
 ZONED: PGCC-2
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

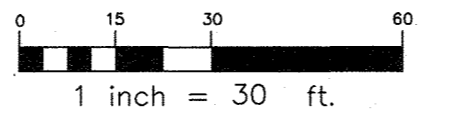
SEDIMENT AND EROSION CONTROL PLAN

DATE: SEPTEMBER 15, 2022 BEI PROJECT NO. 3097
 SCALE: AS SHOWN SHEET 4 OF 9

DESIGN: DBT DRAFT: DBT

SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND

SORT	SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	K-VALUE
Gbb			B		GLADSTONE LOAM, 3 TO 8 PERCENT SLOPES	0.20
Gbc			B		GLADSTONE LOAM, 8 TO 15 PERCENT SLOPES	0.20
Gm*	YES		C		GLENNVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	0.37
Gmb*	YES		C		GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	0.37



B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Using vegetation as cover to protect exposed soil from erosion.

Purpose: To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies: On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity: Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seeded preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment: Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, reestablish using the original recommendations for lime, fertilizer, seed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4.1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Establishment of vegetative cover on cut and fill slopes.

Purpose: To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies: Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria:

A. Incremental Stabilization - Cut Slopes

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
 - a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
 - b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
 - c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
 - d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

B. Incremental Stabilization - Fill Slopes

1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.

Construction sequence example (Refer to Figure B.2):

- a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
- b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
- c. Place Phase 1 fill, prepare seedbed, and stabilize.
- d. Place Phase 2 fill, prepare seedbed, and stabilize.
- e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

Figure B.

B-4.2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose: To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies: Where vegetative stabilization is to be established.

Criteria:

A. Soil Preparation

1. Temporary Stabilization
 - a. Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - b. Apply fertilizer and lime as prescribed on the plans.
 - c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
 - a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - i. Soil pH between 6.0 and 7.0.
 - ii. Soluble salts less than 500 parts per million (ppm).
 - iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lowgrass will be planted, then a sandy soil with less than 30 percent silt plus clay would be acceptable.
 - iv. Soil contains 1.5 percent minimum organic matter by weight.
 - v. Soil contains sufficient space to permit adequate root penetration.
 - b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rack lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seeded preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, topsoil must be of a depth of 3 to 5 inches. Topsoil can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where
 - a. The texture of the exposed subsurface material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing nutrients and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, rocks, trash, or other materials larger than 1 1/2 inches in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate authority, may be used in lieu of natural topsoil.

Topsoil Application

- a. Erosion and sediment control practices must be maintained when applying topsoil.
- b. Topsoil must be spread uniformly to a depth of 3 to 5 inches. Spreading is to be performed in such a manner that topsoiling or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
- c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition. When the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydros seeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 80 to 100 percent will pass through a #200 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Cl Malaga 9-16-22
ENGINEER DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Z... 9/20/22
DEVELOPER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Abdullah B... 10/06/22
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

... 10-17-22
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

... 10/24/22
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Steve G...
DIRECTOR

B-4.3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

The application of seed and mulch to establish vegetative cover.

Purpose: To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies: To the disturbed soils of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria:

A. Seeding

1. Specifications
 - a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. Seed samples must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify the type of seed and seeding rate.
 - b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydros seeding. Note: It is very important to keep inoculants as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for seed control for a recent time has elapsed (14 days min) to permit dissipation of phytotoxic materials.
2. Application
 - a. Dry Seeding: This includes use of conventional drop or broadcast spreaders. Incorporate seed into the subsoil at the rates prescribed on the approved Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
 - b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - i. Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - c. Hydros seeding: Apply seed uniformly with hydros seeding (slurry includes seed and fertilizer).
 - i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydros seeding). Normally, not more than 2 tons are applied by hydros seeding at any one time. Do not use burnt or hydrated lime when hydros seeding.
 - iii. Mix seed and fertilizer on site and seed immediately and without interruption.
 - iv. When hydros seeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)
 - a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw to be free of noxious weeds and seeds as specified in the Maryland Seed Law and must be moist, not decayed, or excessively dry. Note: Use only sterile straw mulch in areas where one species of grass is desired.

B-4.4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose: To use fast growing vegetation that provides cover on disturbed soils. Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria:

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.1.b and maintain until the next seeding season.

B-4.5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

Controlling the suspension of dust particles from construction activities.

Purpose: To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies: Areas subject to dust blowing and movement. Where on and off-site damage is likely without treatment.

Specifications:

1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Erosion and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

B-4.6 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

To stabilize disturbed soils with permanent vegetation.

Purpose: To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils. Exposed soils where ground cover is needed for 6 months or more.

Criteria:

A. Seed Mixtures

1. General Use
 - a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site location or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Riparian Area Planting.
 - c. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
 - d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
2. Turfgrass Mixtures
 - a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - i. Kentucky Bluegrass: Full sun mixture. For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass/Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue/Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 - iv. Kentucky Bluegrass/Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultural Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

C. Ideal Times of Seeding for Turf Grass Mixtures

Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Tall areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/4 inches in diameter. The resulting seedbed must be in such a condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

B. Sod

1. To provide quick cover on disturbed areas (2:1 grade or flatter).
1. General Specifications
 - a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
2. Sod Installation
 - a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted light in order to prevent voids which would cause air drying of the roots.
 - c. Wherever possible, lay sods with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sods and the underlying soil surface.
 - d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
3. Sod Maintenance
 - a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
 - c. Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4.7 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose: To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies: Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria:

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the updrain side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheathing.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate 1/2		Seeding Depth 2/3 (inches)	Recommended Seeding Dates by Plant Hardiness Zone 3/	
	lb/100 sq ft	lb/2000 sq ft		5a and 6a	6b
Cool-Season Grasses					
Annual Ryegrass (Elymus perenne ssp. Multiflorus)	40	1.0	0.5	Mar 1 to May 15; Aug 1 to Oct 31	
Barley (Hordeum vulgare)	56	2.2	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Dart (Avena sativa)	72	1.7	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Creole (Triticum aestivum)	120	2.8	1.0	Mar 1 to May 15; Aug 1 to Oct 31	
Creole Rye (Secale cereale)	112	2.8	1.0	Mar 1 to May 15; Aug 1 to Nov 15	
Warm-Season Grasses					
Forstal Millet (Sorghum fallax)	30	0.7	0.5	May 15 to Jul 31	
Pearl Millet (Pennisetum glaucum)	30	0.5	0.5	May 15 to Jul 31	

Notes:

- 1/ Seeding rates for warm season grasses are in pounds of pure live seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, if seed adjustments are equally not needed for the cool-season grasses.
- 2/ For sandy soils, plant seeds at twice the depth below ground.
- 3/ The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zones.

Permanent Seeding Summary

No.	Species	Application Rate (lb/1000)	Seeding Dates	Seeding Depth (inches)	Fertilizer Rate (lb/2000-20)			Lime Rate
					N	P2O5	K2O	
9	Bluegrass, Kentucky	40	Mar 1 to May 15, Aug 1 to Oct 15	1/4 - 1/2 in	45 pounds (15 lb/1000)	90 lb/1000 (21 lb/1000)	21 lb/1000 (5 lb/1000)	2 tons/acre (900 lb/1000)

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

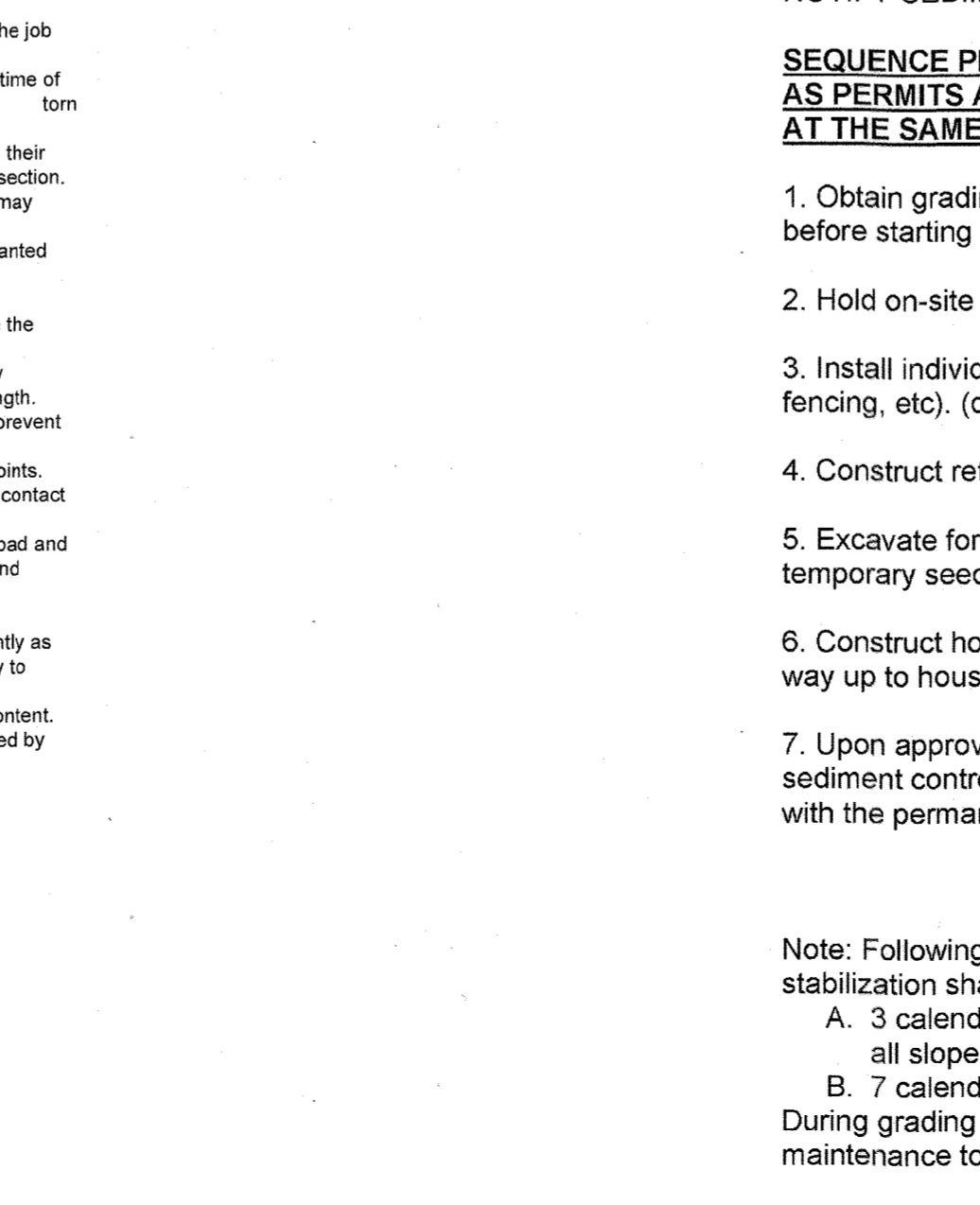
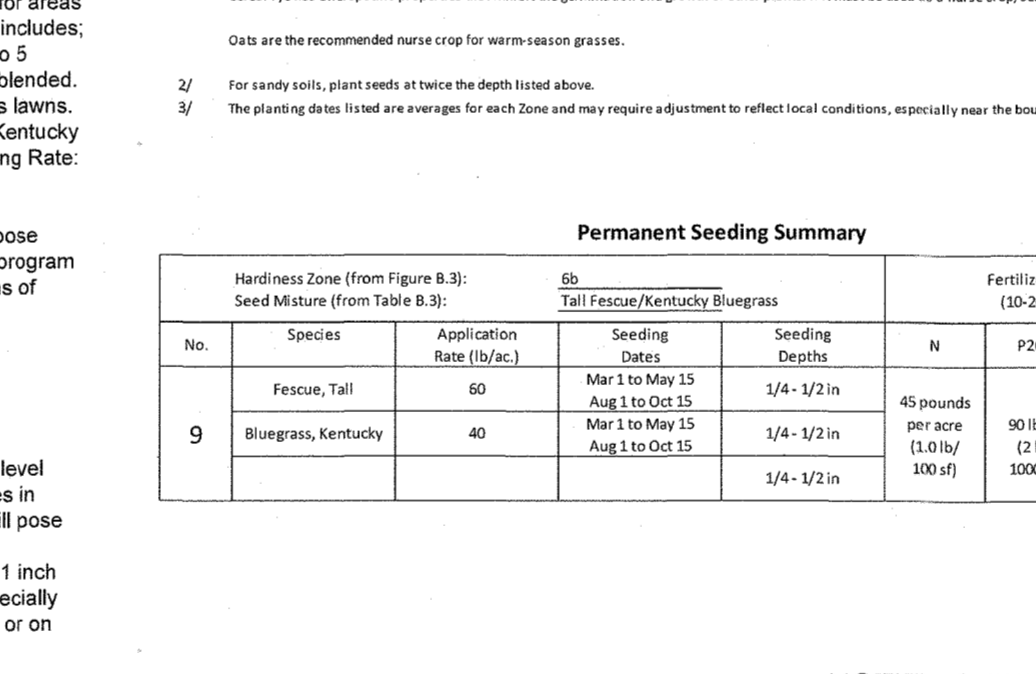
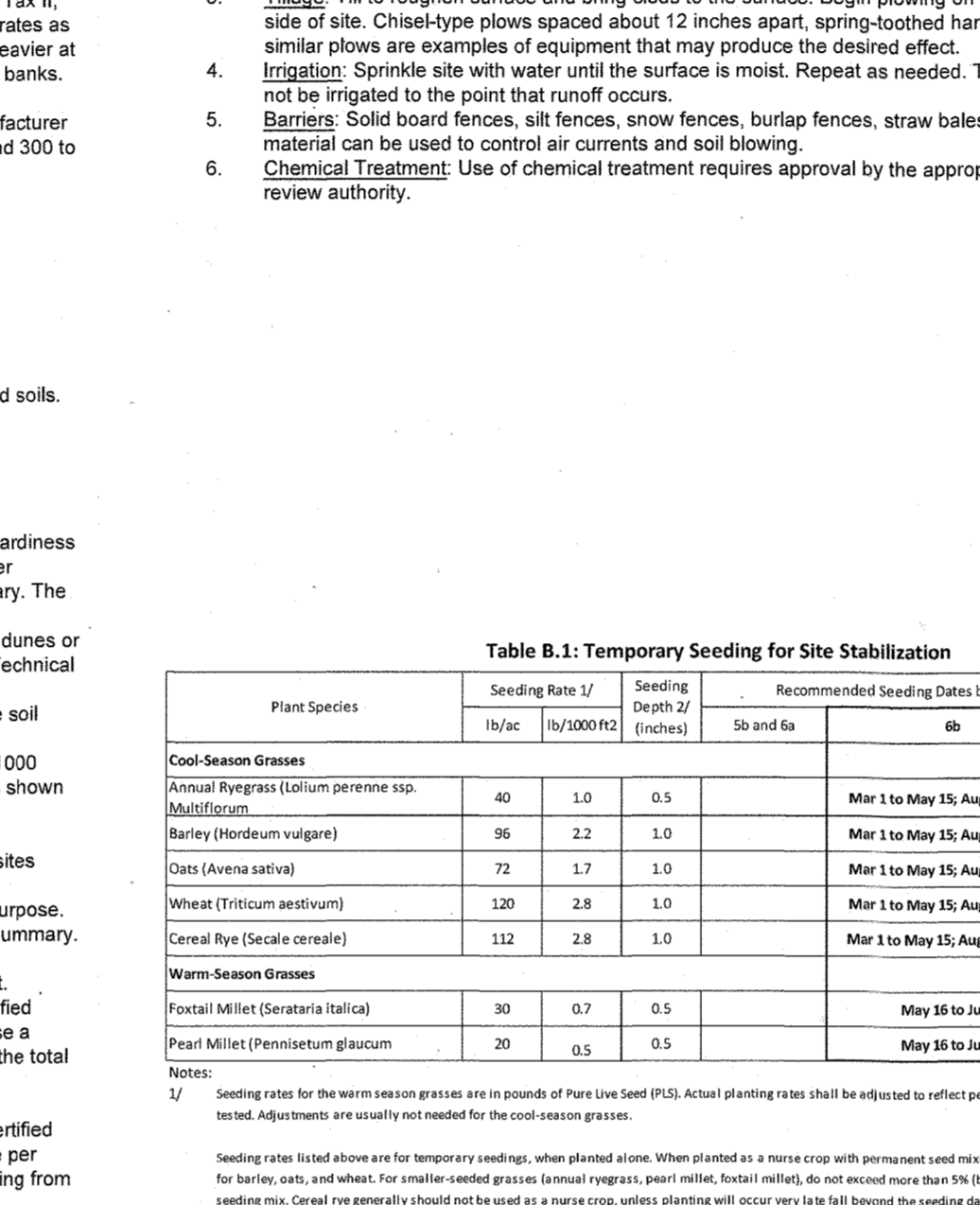
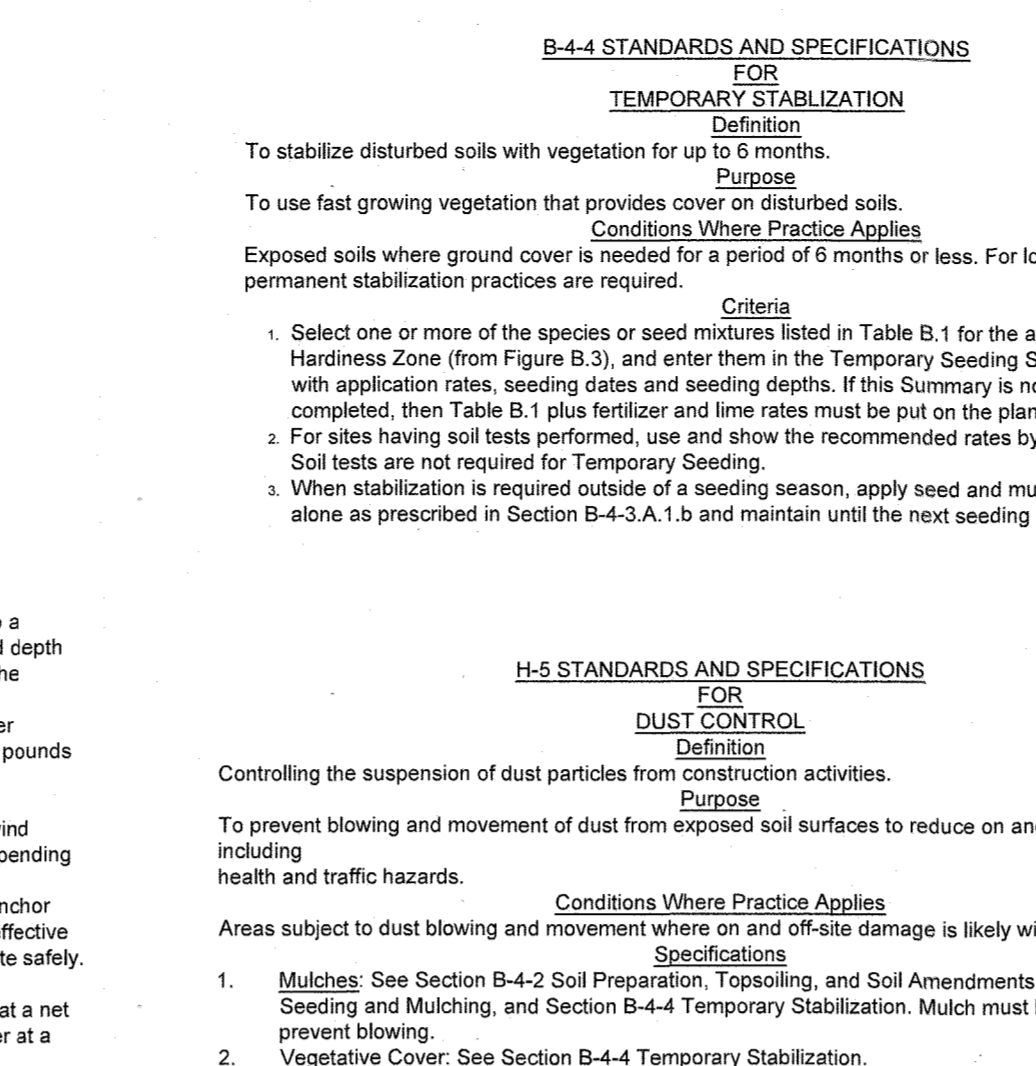
SEQUENCE PERTAINS TO EACH INDIVIDUAL HOUSE OR TOWNHOUSE STICK AS PERMITS ARE ISSUED. NOT ALL HOUSES/STICKS WILL BE CONSTRUCTED AT THE SAME TIME.

1. Obtain grading/building permit. Notify D.I.L.P. at 410-313-1880 at least 24 hours before starting any work. (1 day)
2. Hold on-site pre-construction meeting. (day 2)
3. Install individual lot perimeter controls (i.e. stabilized construction entrance, super silt fencing, etc.). (day 3)
4. Construct retaining wall #1, #2, #3, (if needed for lot stick) and backfill. ((day 4-18)
5. Excavate for house foundation, rough grade lot, and stabilize in accordance with the temporary seedbed notes. (day 19-26)
6. Construct house, install water and sewer house connections from easement/right-of-way up to house, backfill, and construct driveway. (day 27-105)
7. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seedbed notes. (day 106-115)

Note: Following initial soil disturbance or any re-disturbances, permanent or temporary stabilization shall be completed within:

- A. 3 calendar days for all perimeter sediment control structures, dikes, swales and all slopes greater than 3:1.
- B. 7 calendar days for all other disturbed areas.

During grading and after each rainfall, contractor will inspect and provide necessary maintenance to the sediment control measures of this plan.



HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hours notice to CID must be given at the following stages:
 - a. Prior to the start of earth disturbance.
 - b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
 - c. Prior to the start of another phase of construction or opening of another grading unit.
 - d. Prior to the removal or modification of sediment control practices.
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales and ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and within (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15% of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 feet must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization mulching (Sec. B-4-6).
5. All sediment control structures are to remain in place, and are to be maintained in operable condition until their removal has been obtained from the CID.
6. Site Analysis:

Total Area of Site:	3.3 Acres	*CUT/FILL NUMBERS ARE ROUGH ESTIMATE FOR SEDIMENT CONTROL PURPOSES ONLY. CONTRACTOR TO VERIFY.
Area to be roofed or paved:	4.4 Acres	
Area to be vegetatively stabilized:	2.3 Acres	
Total cut:	2,901 Cu Yds	
Total fill:	2,901 Cu Yds	

 Off-site waste/borrow area location: SITE WITH AN ACTIVE GRADING PERMIT
7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - a. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and shall include:
 - Inspection date
 - Inspection type (routine, pre-storm event, during rain event)
 - Name and title of inspector
 - Weather information (current conditions as well as time and amount of last recorded precipitation)
 - Brief description of project's status (e.g. percent complete) and/or current activities
 - Evidence of sediment discharges
 - Identification of plan deficiencies
 - Identification of sediment controls that require maintenance
 - Identification of missing or improperly installed sediment controls
 - Compliance status regarding the sequence of construction and stabilization requirements
 - Photographs
 - Monitoring/sampling
 - Maintenance and/or corrective action performed
 - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
 - b. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back filled and stabilized by the end of each work day, whichever is shorter.
 - c. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.
 - d. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 20 acres cumulatively may be disturbed at a given time.
 - e. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved wastewater structure.
 - f. Topsoil shall be stockpiled and preserved on-site for redistribution into final grade.
 - g. All silt fence and super silt fence shall be placed on—the contour, and be imbricated at 25' minimum intervals, with lower ends curved uphill by 2' in elevation.
 - h. Stream channels must not be disturbed during the following restricted time periods (inclusive):
 - Use I and IP March 1 – June 15
 - Use II and IP October 1 – April 30
 - Use IV March 1 – May 31

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Cl Malaga 9-16-22
ENGINEER DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Z... 9/20/22
DEVELOPER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Abdullah B... 10/06/22
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

... 10-17-22
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

... 10/24/22
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Steve G...
DIRECTOR

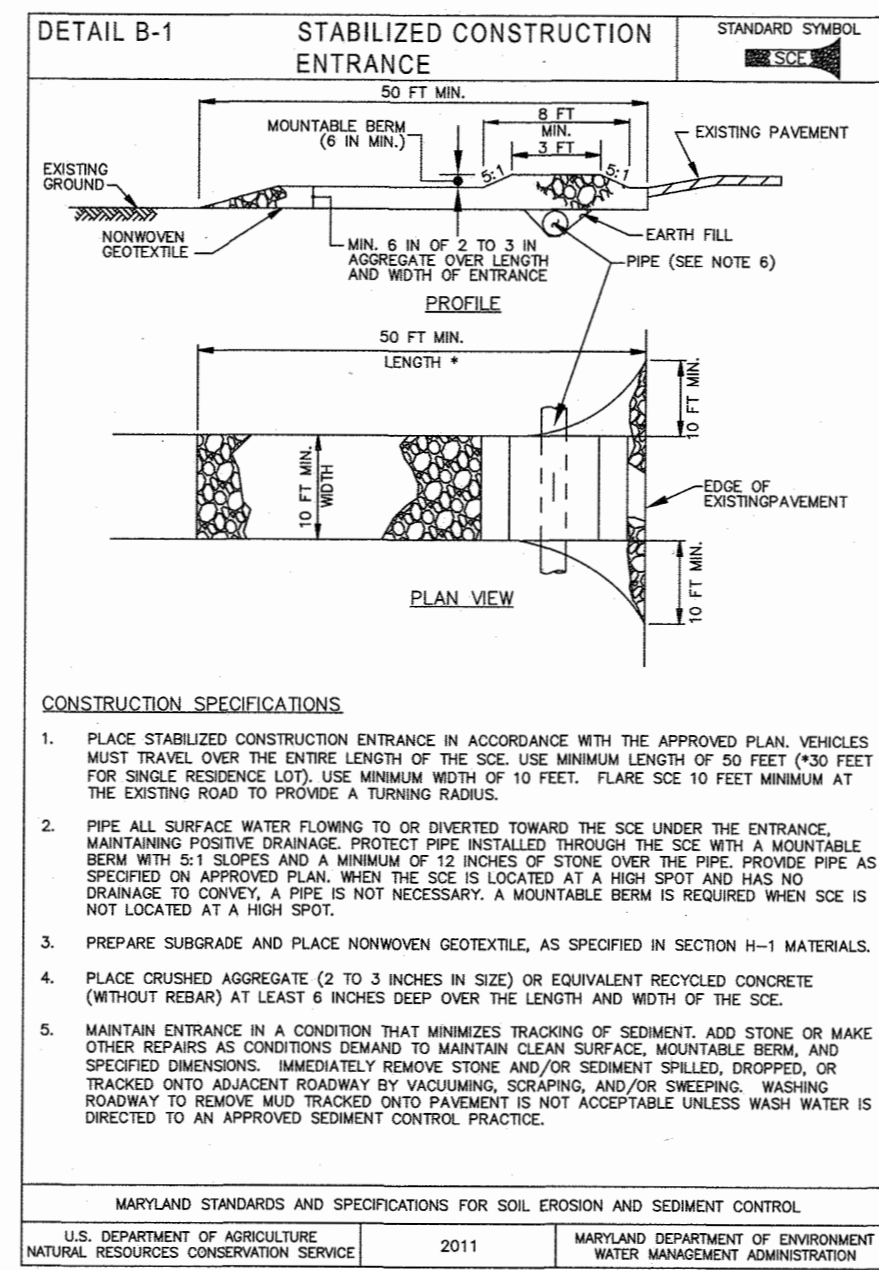
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Cl Malaga 9-16-22
ENGINEER DATE

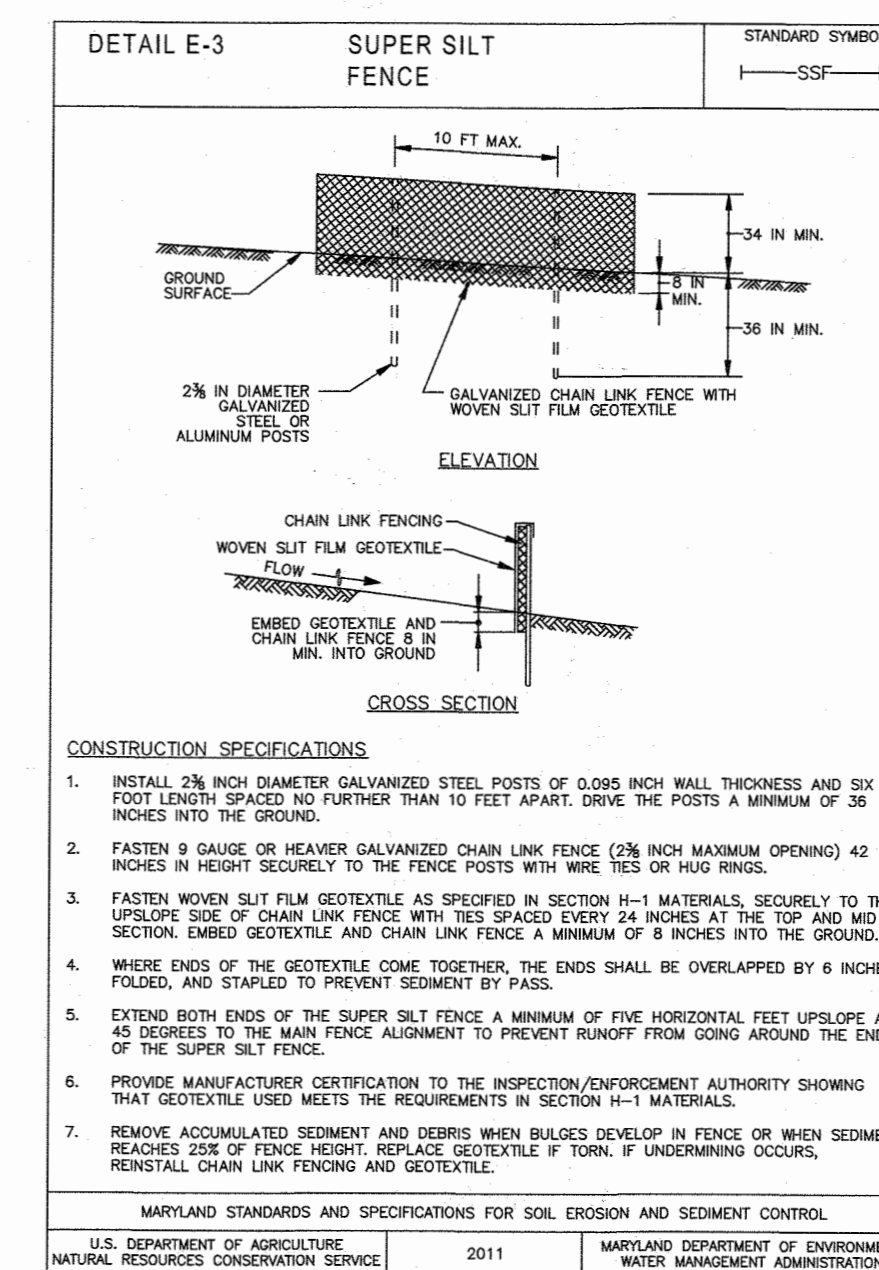
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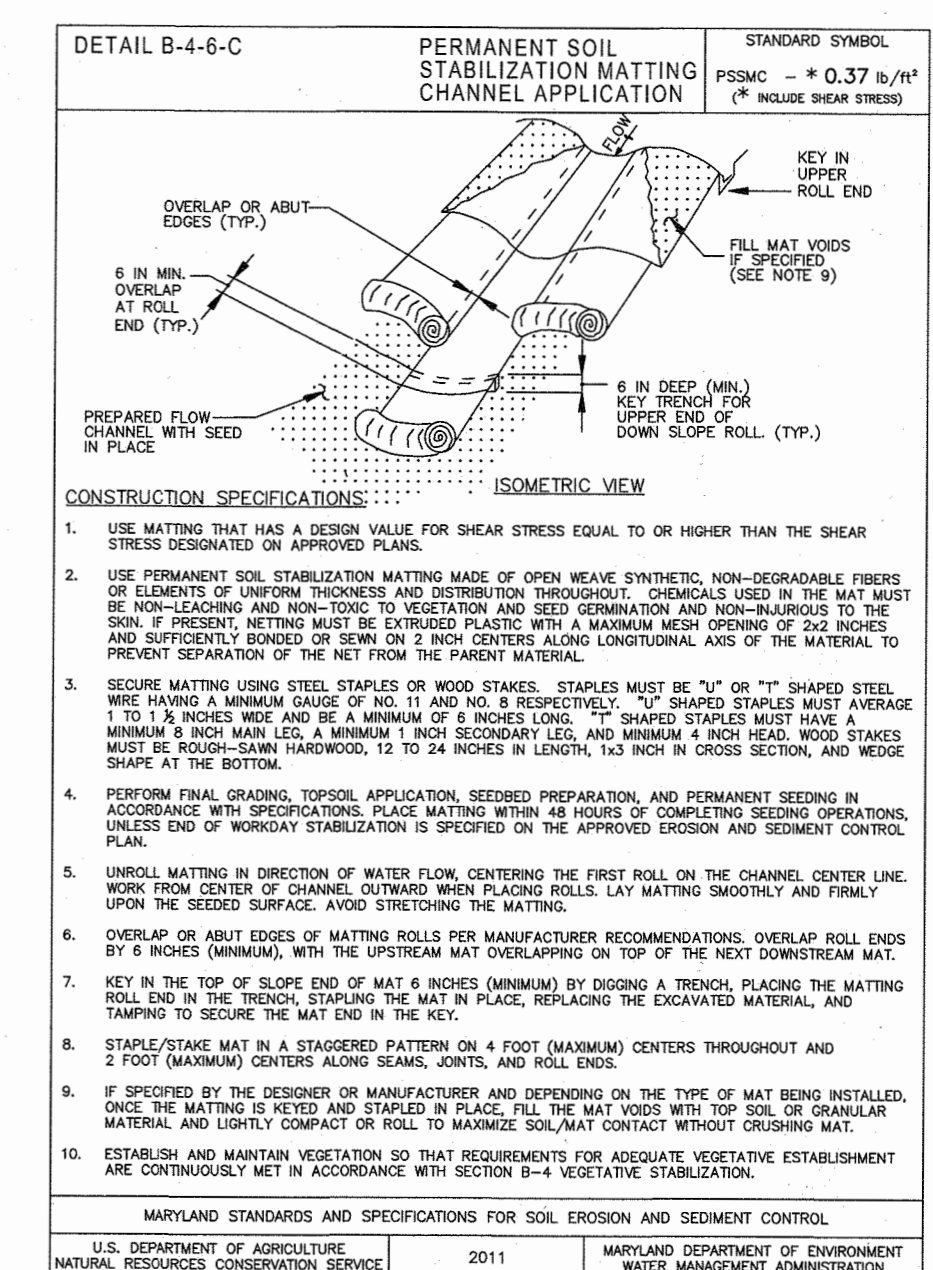
- CONSTRUCTION SPECIFICATIONS**
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (50 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
 2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPE AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
 3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
 4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
 5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLS, DRIFTPILE, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- CONSTRUCTION SPECIFICATIONS**
1. INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 6005 RICH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
 2. FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
 3. FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
 4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
 6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN RAINFALL DEVELOPS IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- CONSTRUCTION SPECIFICATIONS**
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DERIVED ON APPROVED PLANS.
 2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC NON-DEGRADABLE FIBERS OR ELEMENTS OF LINEAR THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALLY USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-ABRASIVE TO THE SOIL. IF PRESENT, NETTING MUST BE EXTENSIVE PLASTIC WITH A MAXIMUM MESH OPENING OF 200 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 3 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
 3. SECURE MATTING USING STEEL STAPLES OR WOOD STAPLES. STAPLES MUST BE 1/4\"/>

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

C. Malaga 9-16-22
 ENGINEER DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 9/20/22
 DEVELOPER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

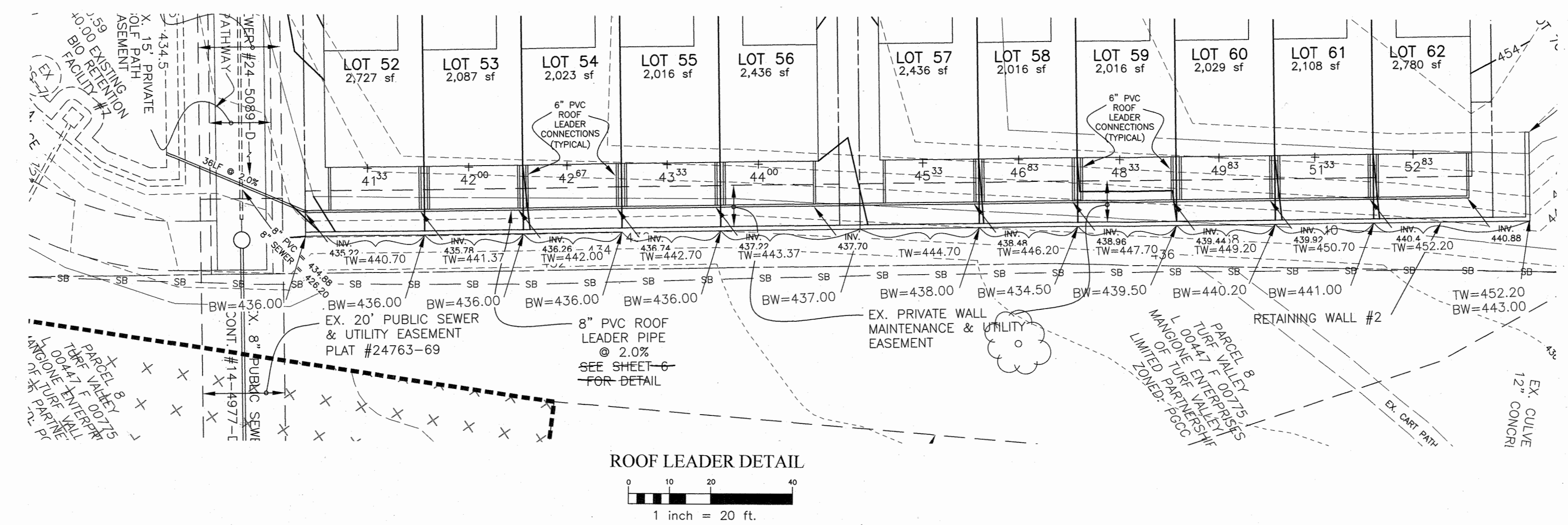
Alexander Bratcher 10/06/22
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/17/22
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 10/24/22
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10/24/22
 DIRECTOR DATE



NO.	DATE	REVISION
1	9/15/2022	REVISE RETAINING WALL HEIGHT AND LENGTH BEHIND LOTS 52-62 AND REVISE LOTS TO ELIMINATE WALKOUT CONDITION. REVISE REAR LOT GRADING ACCORDINGLY. REVISE TOTAL SHEET NUMBER IN TITLE BLOCK.

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 3300 N. RIDGE ROAD SUITE 140 • ELICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6644
 WWW.BEI-CVLENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer (PE) of the State of Maryland. License No. 96016, expires 6-30-2023.

C. Malaga 9-16-22

VILLAGES AT TOWN SQUARE
 Phase 1
 Lots 1 thru 68
 (previously recorded as Plat No. 26006-26010)

TAX MAP: 16 - GRID: 19 - PARCEL: 8
 ZONED: PGCC-2
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION CONTROL DETAILS

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400

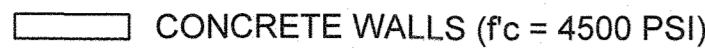

BUILDER: NVR 9720 PATUXENT WOODS DRIVE COLUMBIA, MARYLAND 21046 703-956-4090

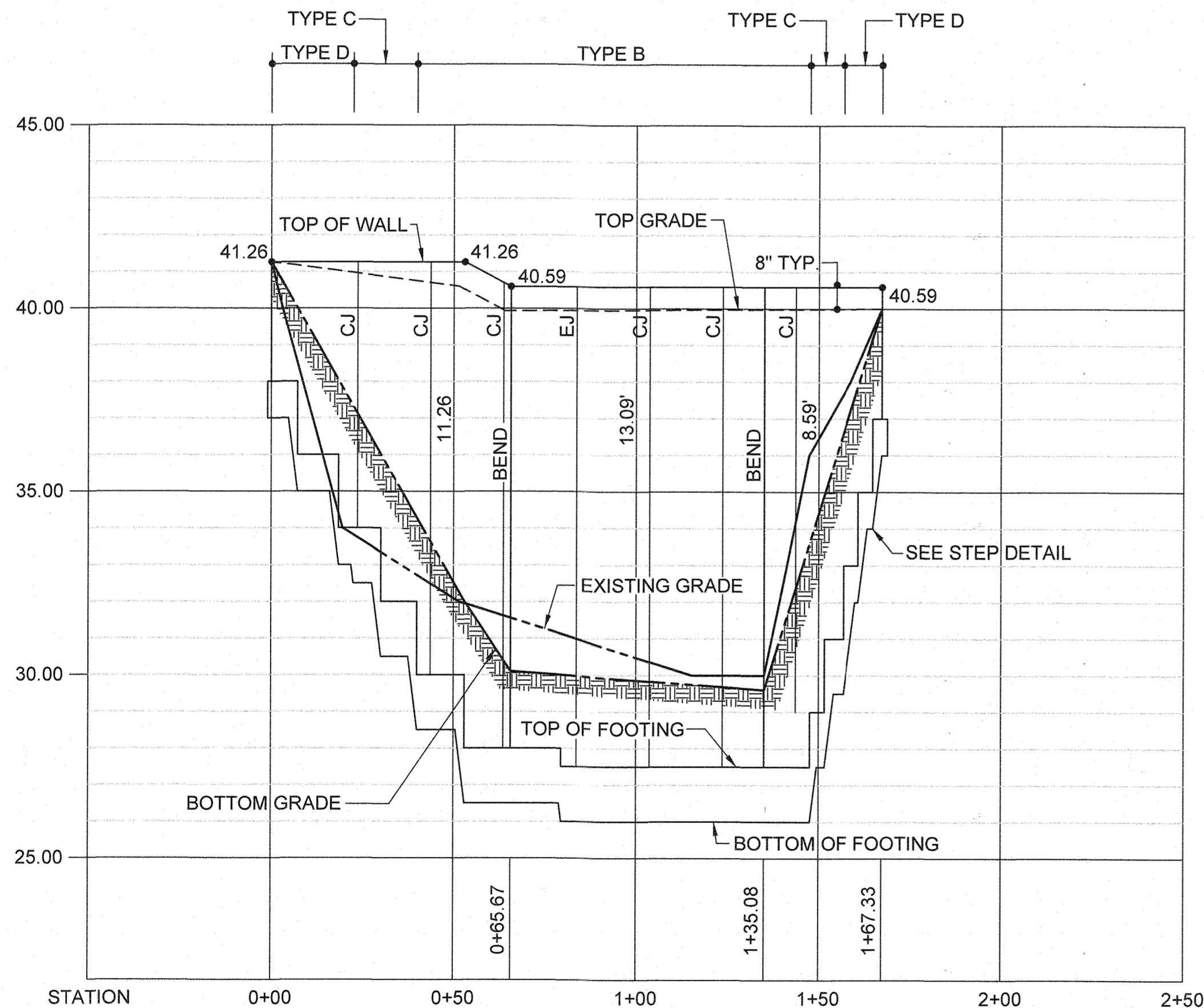
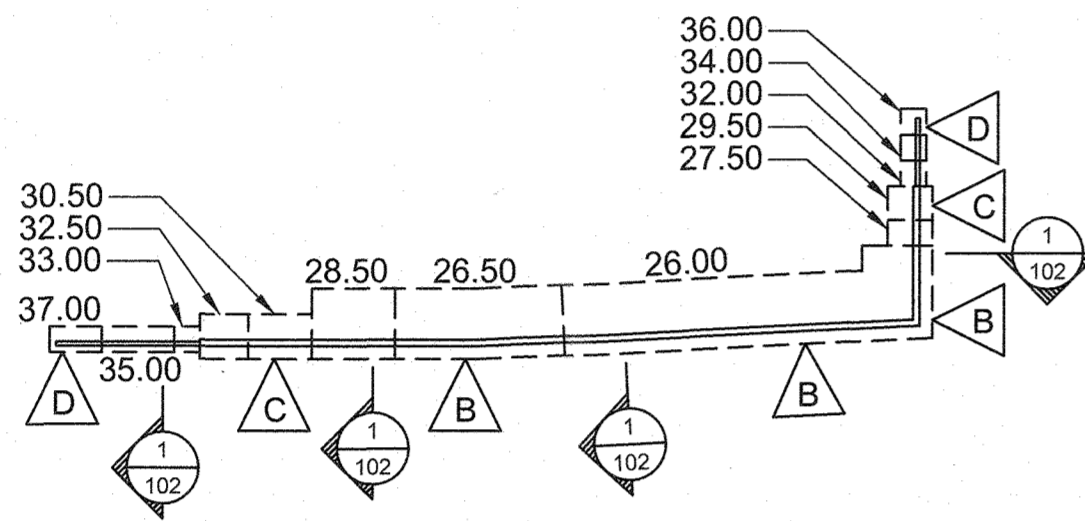
DATE: SEPTEMBER 15, 2022 BEI PROJECT NO. 3097

DESIGN: DBT DRAFT: DBT SCALE: AS SHOWN SHEET 6 OF 9

SITE RETAINING WALL #1 PLAN

SCALE: 1" = 30'-0"



1. ASSUMED SOIL BEARING VALUE = 3000 PSF. SEE GEOTECHNICAL REPORT BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. DATED MAY 24, 2022 FOR ADDITIONAL INFORMATION. SOIL BEARING VALUE SHALL BE VERIFIED IN FIELD BY A REGISTERED GEOTECHNICAL ENGINEER.
2. WALL TYPES ARE INDICATED ON PLAN THUS:
 CONCRETE WALLS (fc = 4500 PSI)
3. ELEVATION BOTTOM OF FOOTINGS ARE SHOWN.
4. RETAINING WALL TYPES ARE INDICATED ON PLAN THUS:  SEE DETAILS AND SCHEDULE ON S201 FOR ADDITIONAL INFORMATION.
5. WORK THIS DRAWING WITH CIVIL DRAWINGS AS PREPARED BY BENCHMARK ENGINEERING, INC.
6. SEE CIVIL DRAWINGS FOR LOCATION AND DETAILS FOR GUARDRAILS

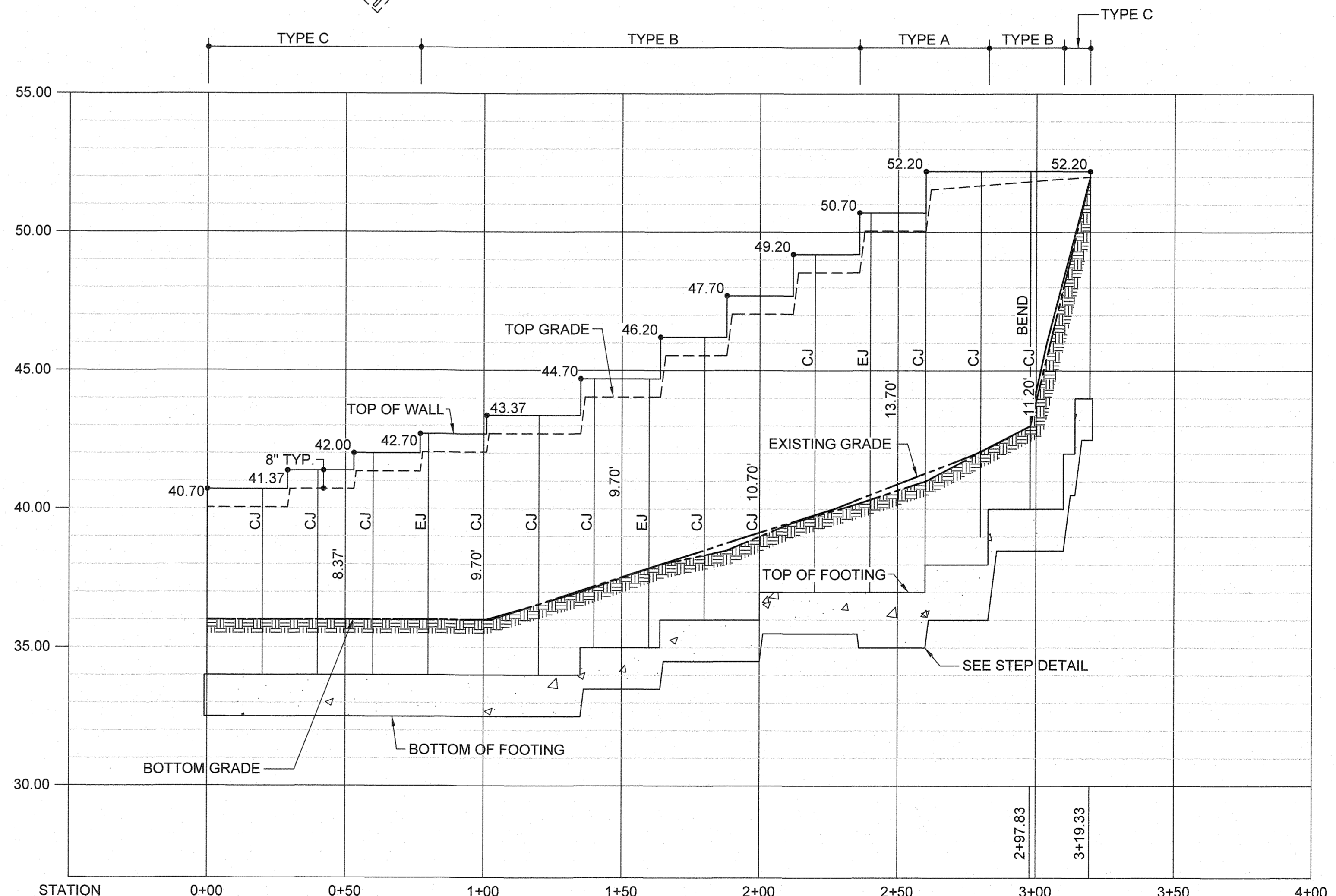
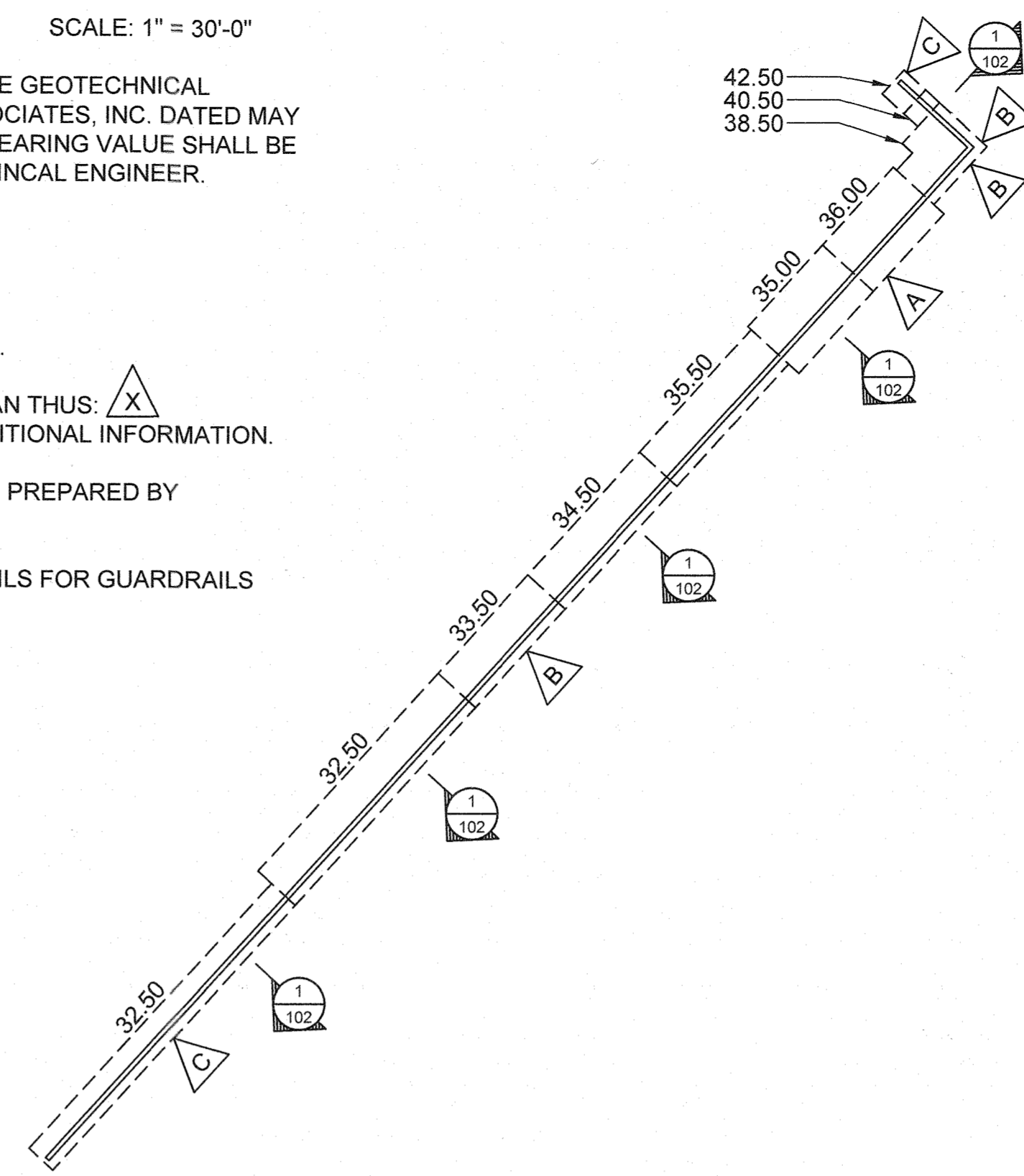


SITE RETAINING WALL #1 ELEVATION
 HORIZONTAL SCALE: 1" = 30'-0"
 VERTICAL SCALE: 1" = 3'-0"

SITE RETAINING WALL #2 PLAN


SCALE: 1" = 30'-0"


1. ASSUMED SOIL BEARING VALUE = 3000 PSF. SEE GEOTECHNICAL REPORT BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. DATED MAY 24, 2022 FOR ADDITIONAL INFORMATION. SOIL BEARING VALUE SHALL BE VERIFIED IN FIELD BY A REGISTERED GEOTECHNICAL ENGINEER.
2. WALL TYPES ARE INDICATED ON PLAN THUS:
 CONCRETE WALLS (fc = 4500 PSI)
3. ELEVATION BOTTOM OF FOOTINGS ARE SHOWN.
4. RETAINING WALL TYPES ARE INDICATED ON PLAN THUS:  SEE DETAILS AND SCHEDULE ON S201 FOR ADDITIONAL INFORMATION.
5. WORK THIS DRAWING WITH CIVIL DRAWINGS AS PREPARED BY BENCHMARK ENGINEERING, INC.
6. SEE CIVIL DRAWINGS FOR LOCATION AND DETAILS FOR GUARDRAILS




SITE RETAINING WALL #2 ELEVATION
 HORIZONTAL SCALE: 1" = 30'-0"
 VERTICAL SCALE: 1" = 3'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 10-17-22
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

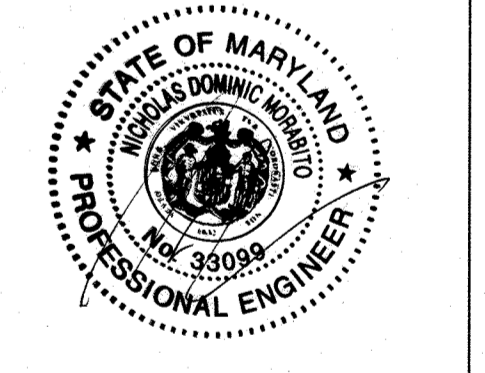
 10/24/22
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

 10/24/22
 DIRECTOR DATE

OWNER:
MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MARYLAND 21093
 410-825-8400

VILLAGES AT TOWN SQUARE PHASE 1
 LOTS 1 THRU 68
 HOWARD COUNTY, MARYLAND

 morabito consultants
 Structural Engineers | Parking Consultants
 952 Ridgeway Road, Suite 1700
 Sparks, MD 21152-9472
 410.467.2377 | www.morabitoconsultants.com
 © Copyright Morabito Consultants, Inc.

Seal:


Professional Certification. I hereby declare that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No.: 33098, Expiration Date: 06/30/23

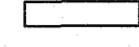

No.	Date	Revisions

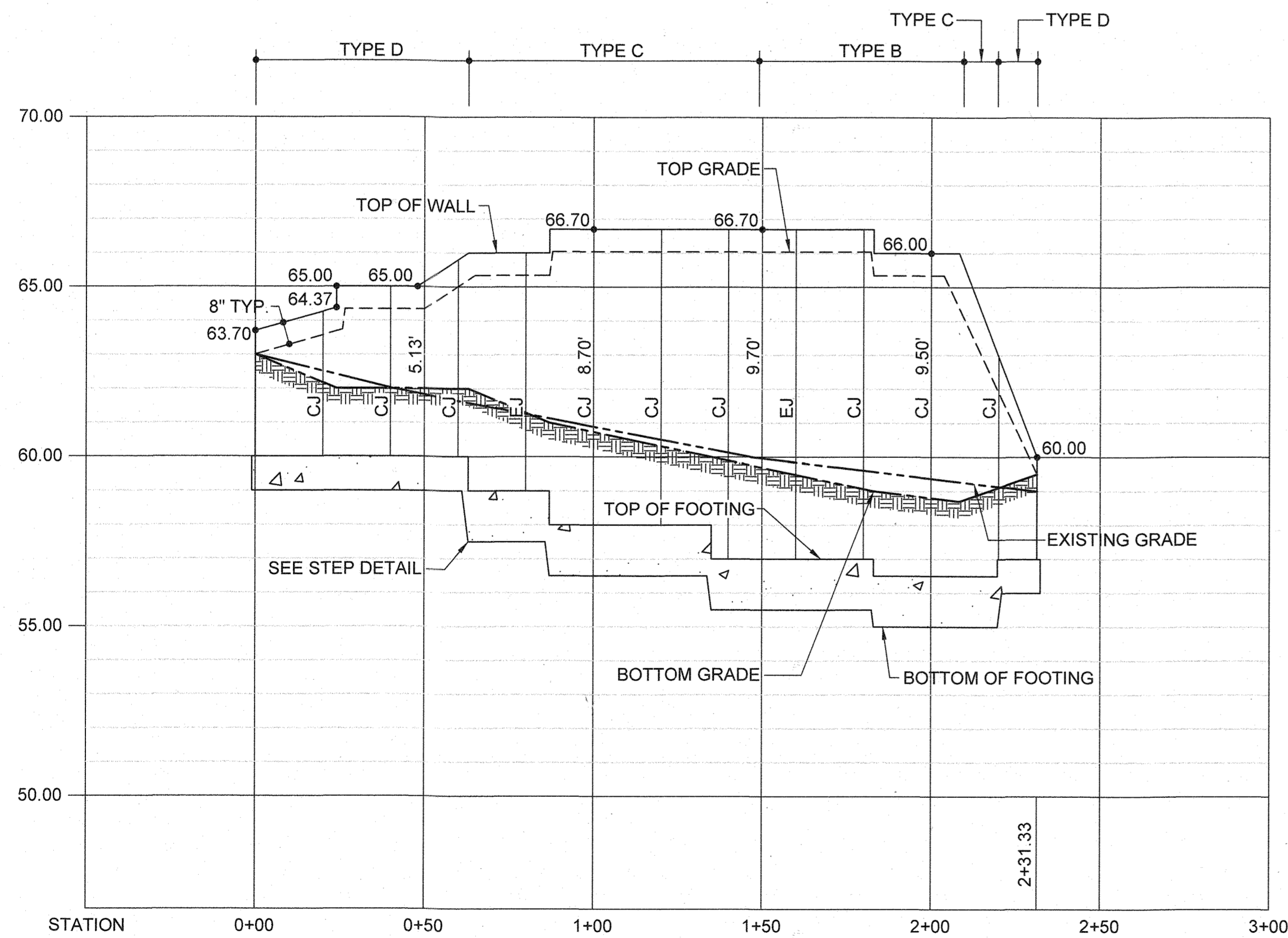
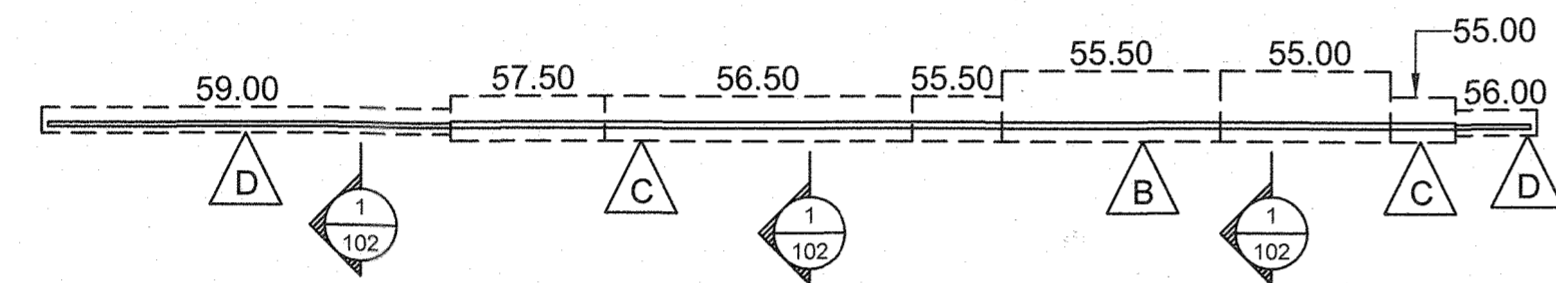
Designed: NDM Drawn: JDL
 Project No.: 22246
 Date: JULY 12, 2022
 Scale: 1" = 30'-0"
 Sheet Title:
 RETAINING WALL 1 AND 2
 PLAN AND ELEVATION

Sheet No.:
S101
 Sheet 07 of 09
 SDP-22-034

SITE RETAINING WALL #3 PLAN

SCALE: 1" = 30'-0"

1. ASSUMED SOIL BEARING VALUE = 3000 PSF. SEE GEOTECHNICAL REPORT BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. DATED MAY 24, 2022 FOR ADDITIONAL INFORMATION. SOIL BEARING VALUE SHALL BE VERIFIED IN FIELD BY A REGISTERED GEOTECHNICAL ENGINEER.
2. WALL TYPES ARE INDICATED ON PLAN THUS:
 CONCRETE WALLS (f_c = 4500 PSI)
3. ELEVATION BOTTOM OF FOOTINGS ARE SHOWN.
4. RETAINING WALL TYPES ARE INDICATED ON PLAN THUS:  SEE DETAILS AND SCHEDULE ON S201 FOR ADDITIONAL INFORMATION.
5. WORK THIS DRAWING WITH CIVIL DRAWINGS AS PREPARED BY BENCHMARK ENGINEERING, INC.
6. SEE CIVIL DRAWINGS FOR LOCATION AND DETAILS FOR GUARDRAILS



SITE RETAINING WALL #3 ELEVATION
 HORIZONTAL SCALE: 1" = 30'-0"
 VERTICAL SCALE: 1" = 3'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Charles Clark 10/12/22
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Robert M. ... 10/24/22
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Steph ... 10/24/22
 DIRECTOR DATE

OWNER:
MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
 410-825-8400

VILLAGES AT TOWN SQUARE PHASE 1 LOTS 1 THRU 68
 HOWARD COUNTY, MARYLAND

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 License No.: 33094, Expiration Date: 09/20/23

No.	Date	Revisions

Designed: NDM Drawn: JDL
 Project No.: 22246

Date: JULY 12, 2022

Scale: 1" = 30'-0"

Sheet Title:
 RETAINING WALL 3 PLAN AND ELEVATION

Sheet No.:
S102
 Sheet 08 of 09
 SDP-22-034

- CONTROLLED FILL AND BACKFILL:**
1. SAMPLES OF ALL MATERIALS THAT THE CONTRACTOR PROPOSES TO USE FOR COMPACTED FILL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER.
 2. COMPACTED FILL SHALL CONSIST OF LOCAL MATERIAL FREE OF DELETERIOUS MATTER AND CLASSIFIED SP, SW, SM, SC, GP, GV, GM, OR GC PER ASTM D-2487.
 3. THE CONTROL OF THE MOISTURE FOR PLACING THE FILL WILL BE BASED ON THE RESULTS OF COMPACTION TESTS PER ASTM D-698.
 4. ALL COMPACTED FILL SHALL HAVE A DENSITY OF AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698.
 5. PRIOR TO PLACEMENT OF ANY FILLS, THE SITE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROCKS, AND ORGANIC MATERIALS AND THE EXPOSED SUBGRADE SHALL BE COMPACTED IN PLACE TO A CONFIRMED DENSITY OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
 6. FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND SHALL BE MIXED, SPREAD AND PLACED IN SUCH A WAY AS TO PRODUCE A UNIFORM THICKNESS OF MATERIAL AFTER PLACING.
 7. EACH LAYER OF FILL SHALL BE COMPACTED WITH A MINIMUM OF 6 COMPLETE PASSES ON ALL PORTIONS OF THE SURFACE OF EACH LIFT OF FILL BY RUBBER-TIRED ROLLERS, SHEEPS-FOOT ROLLERS OR OTHER MECHANICAL EQUIPMENT APPROVED BY THE GEOTECHNICAL ENGINEER.
 8. COMPACTED FILL PLACED WITHIN 4 FEET OF STRUCTURES AND PIPES SHOULD BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 4 INCHES THICKNESS AND COMPACTED WITH HAND TAMMERS OR LIGHT COMPACTION EQUIPMENT TO THE SAME STANDARD.
 9. HEAVY COMPACTION EQUIPMENT SHOULD NOT BE ALLOWED WITHIN 4 FEET OF STRUCTURES UNLESS A MINIMUM 2 FEET DEPTH OF FILL COVERS THE STRUCTURES.
 10. WHENEVER IN PLACE DENSITIES ARE FOUND BELOW ACCEPTABLE LIMITS, ADDITIONAL ROLLING TO PRODUCE THE SPECIFIED DENSITIES SHALL BE REQUIRED.
 11. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROVIDE FOR FREE DRAINAGE OF THE SITE AND TO PREVENT PONDING OF WATER. SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES.
 12. PLACING OF FILL CONTAINING ORGANIC MATTER; PLACING OF FILL WITH MOISTURE CONTENT TOO HIGH OR TOO LOW FOR PROPER COMPACTION; PLACING OF FILL WHEN FREE WATER IS STANDING ON THE EXISTING FILL SURFACE; PLACING OF FILL IN A FROZEN CONDITION OR ON TOP OF FROZEN MATTER WILL NOT BE PERMITTED.
 13. THE SOILS ENGINEER SHALL SUPERVISE THE PLACING OF THE COMPACTED FILL AND ALL THE MATERIAL AND EQUIPMENT USED FOR THIS PURPOSE AND SHALL MAKE SUCH SOILS TESTS AS MAY BE REQUIRED FOR THE COMPLETION OF THE WORK PERFORMING AT LEAST 6 IN PLACE DENSITY TESTS DURING EACH EIGHT HOUR SHIFT.

- FOUNDATIONS-SPREAD FOOTINGS:**
1. BOTTOM OF ALL FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW ORIGINAL GRADE OR PLACED IN APPROVED COMPACTED FILL.
 2. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISHED GRADE.
 3. A SOIL BEARING CAPACITY OF 3000 PSF WAS USED IN THE FOUNDATION DESIGN, AND MUST BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER. IF SOIL OF THIS BEARING CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS INDICATED ON THE CONTRACT DRAWINGS, FOOTINGS SHALL BE LOWERED OR INCREASED IN SIZE AS DIRECTED BY THE STRUCTURAL ENGINEER.
 4. ELEVATIONS SHOWN ON PLAN ARE TO THE BOTTOM OF THE FOOTINGS.

- CONCRETE:**
1. ALL CONCRETE WORK SHALL CONFORM TO ALL THE PROVISIONS OF THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
 2. CONCRETE PROPERTIES FOR EACH STRUCTURAL ELEMENT IS DEFINED IN THE DESIGN DATA SECTION ON THIS SHEET.
 3. CONCRETE SHALL CONFORM TO ALL THE PROVISIONS OF "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING" (ACI 305) AND "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING" (ACI 308).
 4. ALL FORMWORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "FORMWORK FOR CONCRETE" SPECIAL PUBLICATION NO. 4 AND ACI'S "STANDARD RECOMMENDED PRACTICE FOR CONCRETE FORMWORK" (ACI-347).
 5. CONCRETE MIX DESIGN SHALL BE BASED ON LABORATORY TRIAL BATCH METHOD DESCRIBED IN ACI-318. CONCRETE SHALL ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:
 6. ALL CONCRETE EXPOSED TO THE WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6% +/- 1%.
 7. THE MAXIMUM WATER CEMENT RATIO W/C SHALL NOT EXCEED 0.56 FOR ALL CONCRETE EXCEPT CONCRETE EXPOSED TO WEATHER WHICH SHALL NOT EXCEED 0.45.
 8. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED.
 9. THE MAXIMUM SLUMP OF ALL CONCRETE SHALL BE 4".
 10. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED FOR COMPLETION OF WORK.
 11. ONE SET OF COMPRESSIVE TEST CYLINDERS FOR EACH 100 CUBIC YARDS SHALL BE CAST FOR EACH DAY'S POUR AND EACH CLASS OF CONCRETE, ALONG WITH SLUMP TESTS SHALL BE PERFORMED BY A TESTING LABORATORY APPROVED BY THE STRUCTURAL ENGINEER.
 12. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE AND HAVE BEEN APPROVED BY THE ENGINEER.

- REINFORCING STEEL:**
1. REINFORCING STEEL SHALL BE DEFORMED BARS IN ACCORDANCE WITH ASTM A-615, GRADE 60.
 2. BENDS AND HOOKS ARE TO BE FABRICATED IN ACCORDANCE WITH ACI SP-98 ACI DETAILING MANUAL AND AS PER DETAILS.
 3. PLACE MAIN REINFORCING STEEL SO AS TO PROVIDE 3" MINIMUM COVER FOR FOUNDATIONS POURED ON EARTH, 2" MINIMUM COVER FOR BEAMS AND COLUMNS, 3/4" MINIMUM COVER FOR SLABS AND 1 1/2" FOR ALL REBAR IN EXPOSED CONCRETE (EXCEPT AS OTHERWISE IN DETAILS).
 4. LAP DEFORMED BARS IN ACCORDANCE WITH LAP SCHEDULE ON THESE DRAWINGS, UNO.
 5. HOOKS SHALL BE STANDARD HOOKS, UNO.
 6. PROVIDE ACCESSORIES AND BAR SUPPORTS IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).
 7. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-1064, UNO.
 8. WWF REINFORCING SHALL BE PLACED AT MID-DEPTH OF SLABS ON GRADE AND DRAPED OVER SUPPORTS IN CONCRETE ON METAL DECK SLABS.
 9. END LAPS OF ALL WWF REINFORCING SHALL BE LAPPED (1) SQUARE.

- POST-INSTALLED ANCHORS:**
1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
 2. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, FATIGUE, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
 3. ANCHOR CAPACITY IS HIGHLY DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE/MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS. IF EDGE DISTANCES OR ANCHOR SPACING IS NOT SPECIFIED ON THE DRAWINGS, PROVIDE THE FOLLOWING MINIMUM DISTANCES:

- A. EDGE DISTANCES**
1. ADHESIVE ANCHORS: 2 TIMES THE ANCHOR EMBEDMENT LENGTH
 2. UNDERCUT ANCHORS: 2.5 TIMES THE ANCHOR EMBEDMENT LENGTH
 3. EXPANSION ANCHORS (SLEEVE OR WEDGE): 4 TIMES THE ANCHOR EMBEDMENT LENGTH
- B. ANCHOR SPACING**
1. ALL ANCHORS: 3 TIMES THE ANCHOR EMBEDMENT
- INSTALLATION INSTRUCTIONS (MPI):**
1. ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, BUILDING CODE, AND MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI).
 2. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL POST-INSTALLED ANCHORS HAVE BEEN PROPERLY TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING FOR EACH SPECIFIC PRODUCT.
 3. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED UNDER TENSION LOADS (AS DETERMINED BY THE ENGINEER) SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE ACI-CRS' ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.
 4. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED UNDER TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THIS PURPOSE BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL FURNISH A REPORT TO THE STRUCTURAL ENGINEER OF RECORD AND BUILDING OFFICIAL THAT THE WORK COVERED BY THE REPORT HAS BEEN PROPERLY PERFORMED AND THAT THE MATERIALS USED AND THE INSTALLATION PROCEDURES USED CONFORM WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI).
 5. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. IF HIGH-EARLY STRENGTH CONCRETE MIXES ARE SPECIFIED, CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL OF MINIMUM INSTALLATION AGE.
 6. EXISTING REINFORCING BARS OR PRESTRESSING STEEL IN THE EXISTING STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TESTING TO LOCATE THE POSITION AND DEPTH OF THE REINFORCING BARS OR PRESTRESSING STEEL.
 7. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES. ANCHORS EXPOSED TO WEATHER AND AT SILL PLATES SHALL BE STAINLESS STEEL.
 1. MECHANICAL ANCHORS IN CRACKED OR UNCRACKED CONCRETE USE:
 - a. HILTI KWIK BOLT-TZ EXPANSION ANCHORS
 - b. HILTI KWIK HUS-EZ AND KWIK HUS EZ-1 SCREW ANCHORS
 2. ADHESIVE ANCHORS IN CRACKED AND UNCRACKED CONCRETE USE:
 - a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD
 - b. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM WITH HAS-8 THREADED ROD

- SUBMITTALS:**
1. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER.
 2. ALL SHOP DRAWINGS USED FOR WORK SHALL BEAR THE STAMP OF THE ARCHITECT/ENGINEER AND SHALL BE MARKED "APPROVED" OR "APPROVED AS NOTED" AND MARK AS HAVING BEEN VERIFIED.
 3. CONTRACTOR SHALL CHECK SHOP DRAWINGS THOROUGHLY BEFORE SUBMITTING. VERIFY DIMENSIONS REQUIRING FIELD VERIFICATION BEFORE SUBMITTING.
 4. ALL CONTRACTOR MODIFICATIONS (INCLUDING PRODUCTS SUBMISSION) MUST BE IDENTIFIED IN WRITING AS A PROPOSED "AS EQUAL" CHANGES AT TIME OF SUBMISSION.
 5. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS OR FAILS TO FOLLOW THE ABOVE "AS EQUAL" PROCEDURE, THE FIRM MORABITO CONSULTANTS, INC. WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT.
 6. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT.

- INSPECTION:**
1. ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES.
 2. THE OWNER SHALL HIRE AN EXPERIENCED QUALIFIED INSPECTOR TO PERFORM ALL REQUIRED INSPECTION WORK.
 3. INSPECTION SHALL CONSIST OF VISUAL OBSERVATIONS OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE DESIGN INTENT.
 4. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS PART OF THIS PRESENT CONTRACT WITH THE ARCHITECT/OWNER.
 5. UNDER THIS PRESENT CONTRACT, THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. HOWEVER, SUCH VISITS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHOULD IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT. HOWEVER, IF DESIRED, MORABITO CONSULTANTS, INC. MAY BE HIRED UNDER A SEPARATE CONTRACT TO PERFORM THIS INSPECTION WORK.

- DESIGN WITHOUT CONSTRUCTION REVIEW:**
1. IT IS AGREED THAT IF MORABITO CONSULTANTS, INC.'S PROFESSIONAL SERVICES DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTOR'S WORK OR PERFORMANCE, THEN THE OWNER WILL DEFEND, INDEMNIFY AND HOLD HARMLESS MORABITO CONSULTANTS, INC., FROM ANY CLAIM OR SUIT WHATSOEVER, INCLUDING BUT NOT LIMITED TO ALL PAYMENTS, EXPENSES OR COSTS INVOLVED, ARISING FROM OR ALLEGED TO HAVE ARISEN FROM THE CONTRACTOR'S PERFORMANCE OR THE FAILURE OF THE CONTRACTOR'S WORK TO CONFORM TO THE DESIGN INTENT AND THE CONTRACT DOCUMENTS.
 2. MORABITO CONSULTANTS, INC., AGREES TO BE RESPONSIBLE FOR ITS OWN OR ITS EMPLOYEES' NEGLIGENCE, ACTS, ERRORS OR OMISSIONS.

- OWNERSHIP OF DOCUMENTS:**
1. THE CONTRACTOR ACKNOWLEDGES THESE PLANS AND SPECIFICATIONS PREPARED BY MORABITO CONSULTANTS, INC., AS INSTRUMENTS OF PROFESSIONAL SERVICE.
 2. NEVERTHELESS, THE PLANS AND SPECIFICATIONS PREPARED UNDER THIS AGREEMENT SHALL REMAIN THE PROPERTY OF MORABITO CONSULTANTS, INC. UPON COMPLETION OF THE WORK.
 3. THE CONTRACTOR AGREES TO HOLD HARMLESS AND INDEMNIFY MORABITO CONSULTANTS, INC., AGAINST ALL DAMAGES, CLAIMS, AND LOSSES, INCLUDING DEFENSE COSTS, ARISING OUT OF ANY REUSE OF THE PLANS AND SPECIFICATIONS WITHOUT THE WRITTEN AUTHORIZATION OF MORABITO CONSULTANTS, INC.

- DESIGN DATA:**
- CONCRETE:**
NORMAL WEIGHT CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH (F_c) AS FOLLOWS:
ALL CONCRETE = 4500 PSI
- REINFORCING STEEL:** F_y = 60,000 PSI

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

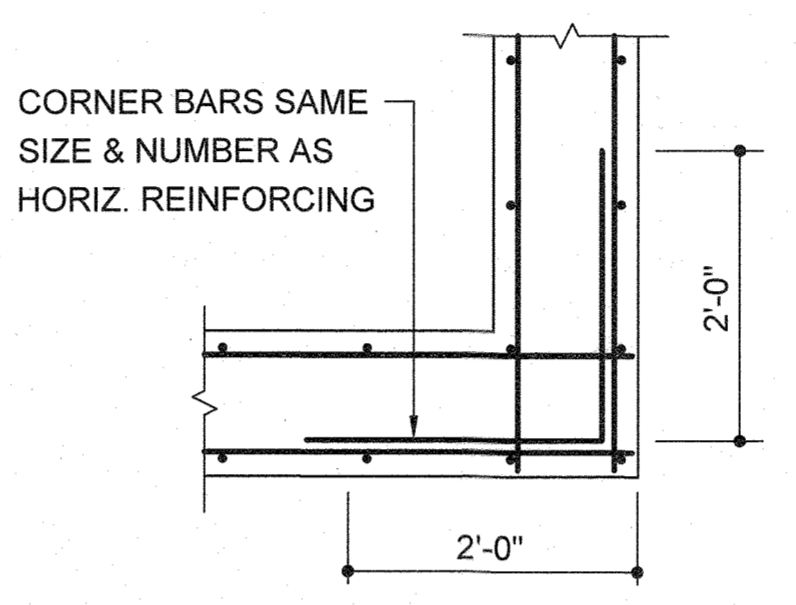
[Signature] 10/17/22 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/24/22 DATE
CHIEF DIVISION OF LAND DEVELOPMENT

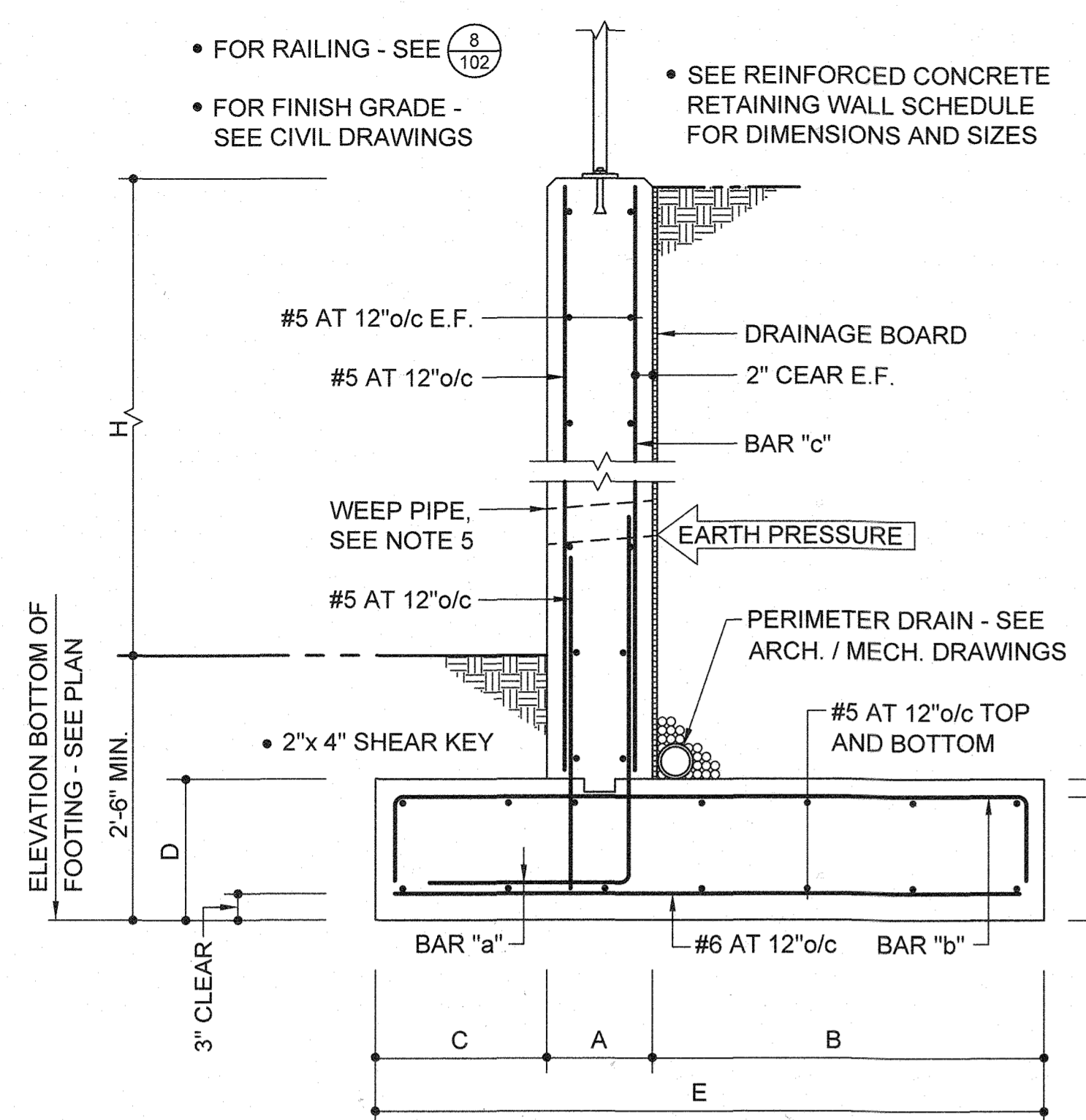
[Signature] 10/24/22 DATE
DIRECTOR

MARK	HEIGHT (NOTE 4)	WALL	FOOTING			REINFORCING			
			H	A	E x D	B	C	BAR "a"	BAR "b"
A	13'-0"	12"	15'-0" x 24"	9'-0"	5'-0"	#10 AT 8"o/c	36"	#7 AT 12"o/c	#7 AT 8"o/c
B	10'-0"	12"	11'-0" x 18"	8'-0"	2'-0"	#8 AT 12"o/c	36"	#6 AT 12"o/c	#6 AT 12"o/c
C	7'-0"	12"	7'-0" x 18"	4'-0"	2'-0"	#6 AT 12"o/c	36"	#6 AT 12"o/c	#5 AT 12"o/c
D	4'-0"	8"	4'-0" x 12"	2'-0"	1'-0"	#5 AT 12"o/c	30"	#5 AT 12"o/c	#5 AT 12"o/c

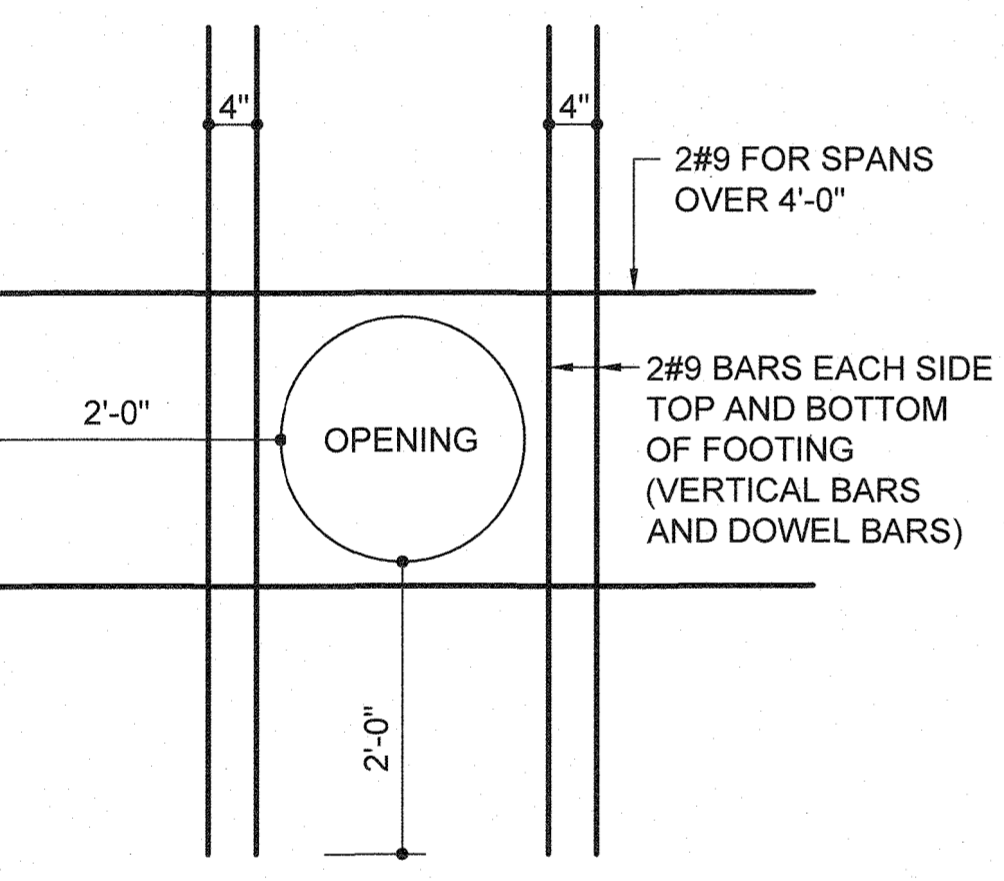
- RETAINING WALL NOTES:**
1. ALL CONCRETE FOR RETAINING WALLS AND RETAINING WALL FOOTINGS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI
 2. LATERAL EARTH PRESSURE OF 40H (PSF) AND ALLOWABLE BEARING PRESSURE OF 3,000 PSF WERE USED IN THE DESIGN OF BELOW GRADE SITE WALLS AND FOOTINGS AND MUST BE VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER.
 3. DO NOT BACKFILL WALLS UNTIL CONCRETE HAS ATTAINED DESIGN STRENGTH.
 4. RETAINED EARTH SHALL NOT EXCEED THE CORRESPONDING HEIGHT, H, AS NOTED IN SCHEDULE.
 5. PROVIDE 4" SOLID PVC WEEP PIPES AT 15'-0" o/c MAX. U.N.O. - WEEP PIPES TO BE LOCATED 12" ABOVE LOW GRADE



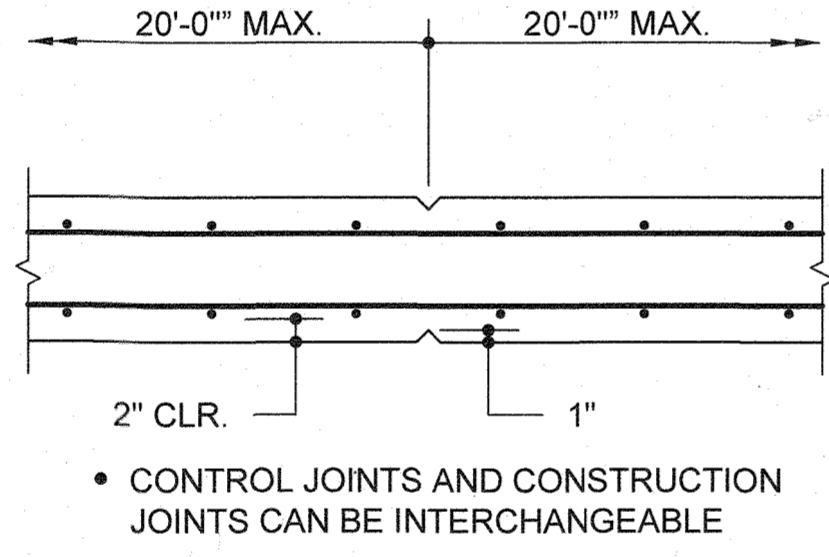
2 TYP. CORNER BARS



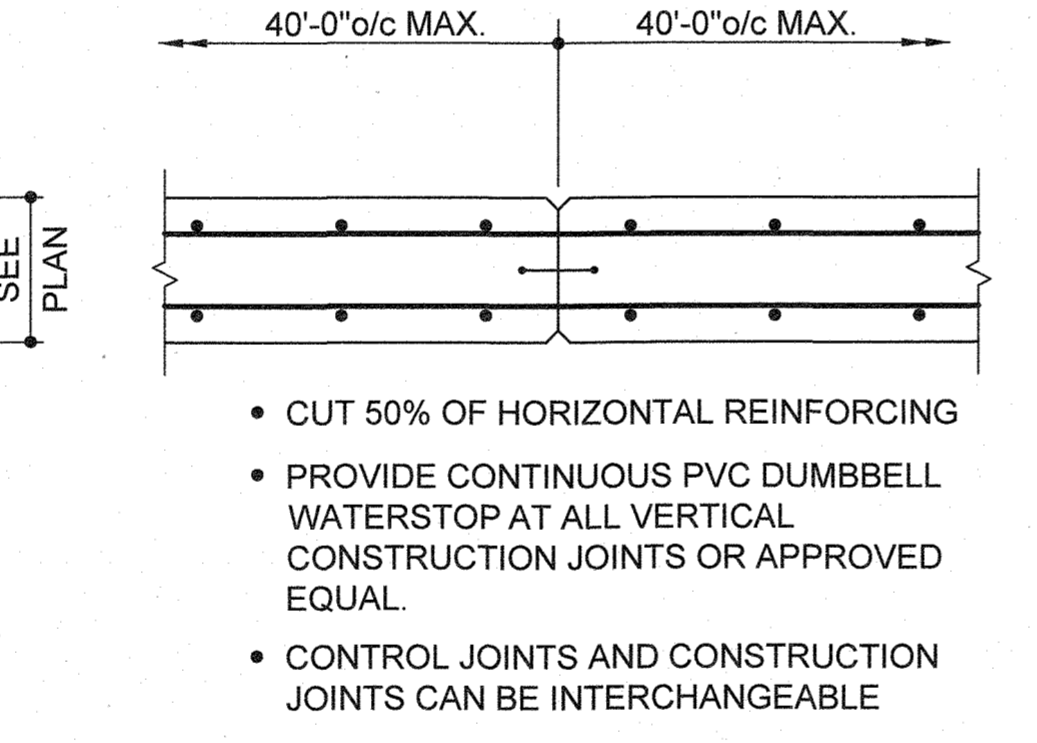
1 TYPICAL CONCRETE RETAINING WALL



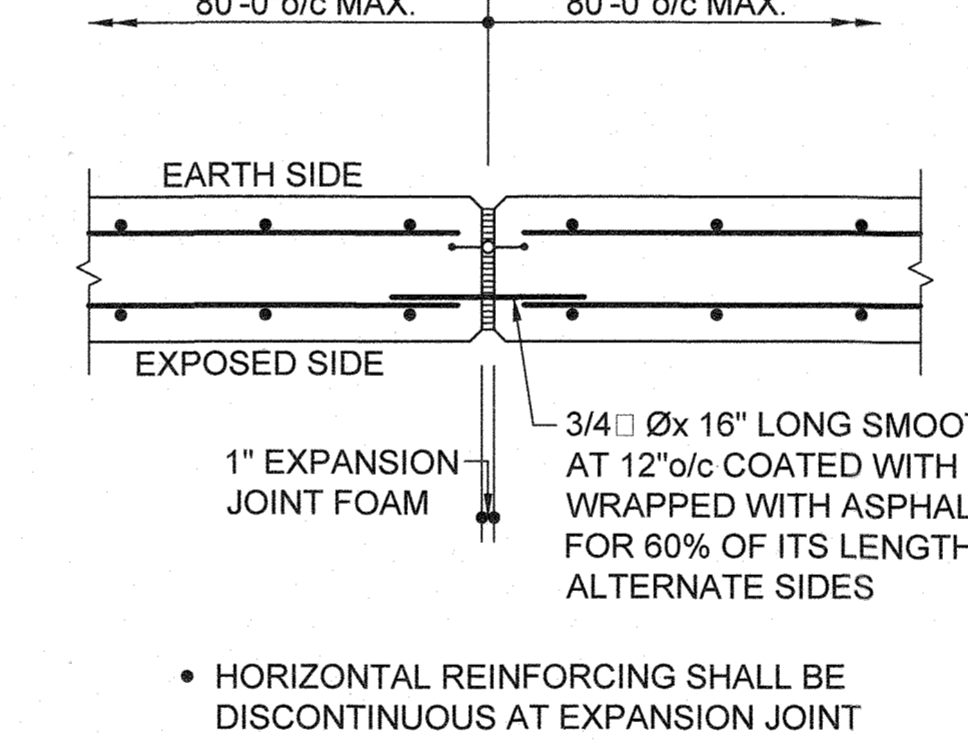
3 TYPICAL OPENING IN CONCRETE WALL



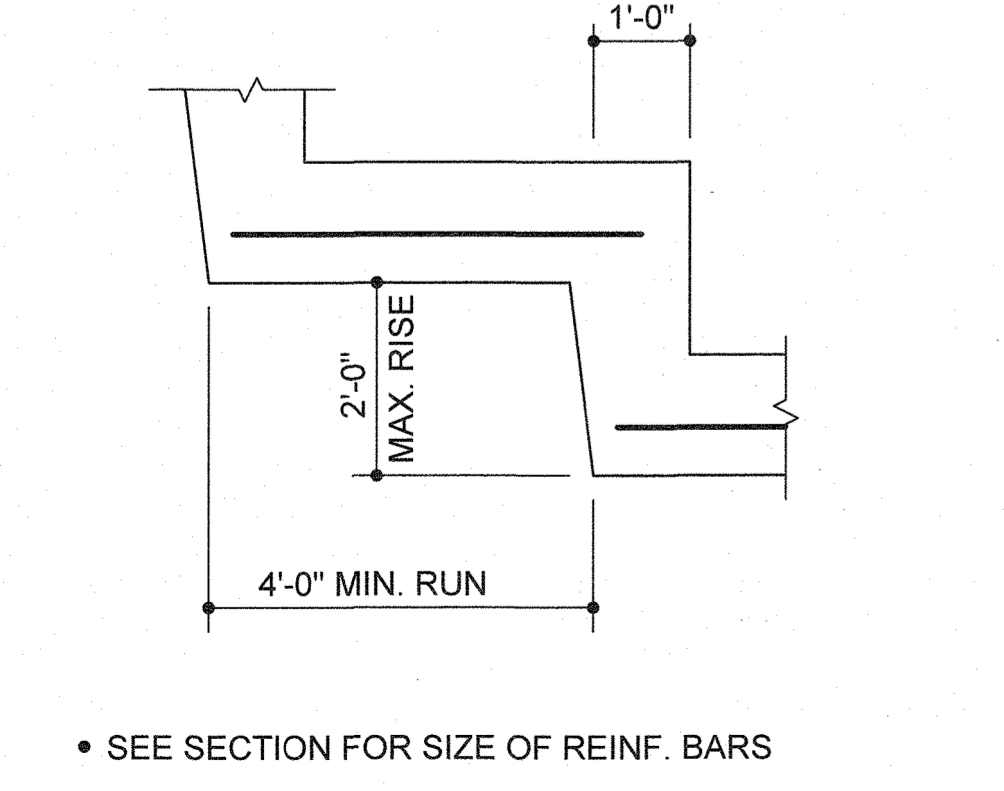
4 CONTROL JOINT IN CONCRETE WALLS



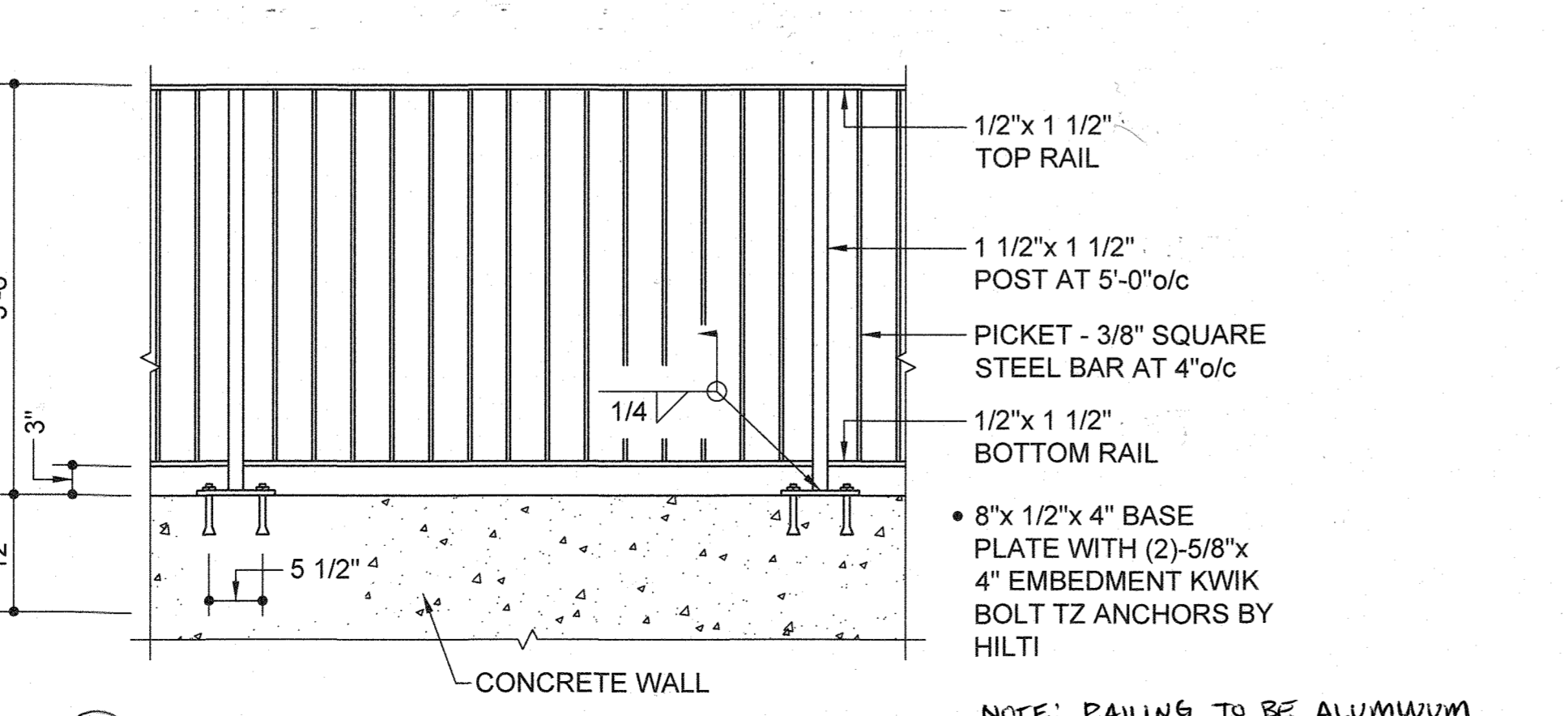
5 CONSTRUCTION JOINT IN CONCRETE WALLS



6 EXPANSION JOINT IN CONCRETE WALLS



7 TYP. STEPPED FOOTING

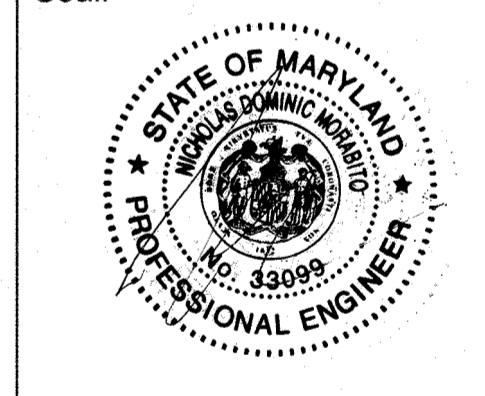


8 TYPICAL RAILING ELEVATION

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
410-825-8400

VILLAGES AT TOWN SQUARE PHASE 1 LOTS 1 THRU 68
HOWARD COUNTY, MARYLAND

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License No.: 48099, Expiration Date: 09/30/27

No.	Date	Revisions

Designed: NDM Drawn: JDL
Project No.: 22246
Date: JULY 12, 2022
Scale: 3/4" = 1'-0"

Sheet Title: RETAINING WALL DETAILS AND GENERAL NOTES
Sheet No.: S201
Sheet 09 of 09
SDP-22-034